

Patents 10699294

5/3,K/2 (Item 2 from file: 347)
DIALOG(R)File 347: JAPIO
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06746801 **Image available**

**DEMULTIPLEXER FOR ADSL AND TRANSMISSION SYSTEM USING THE
DEMULTIPLEXER**

Pub. No.: 2000-332656 [JP 2000332656 A]
Published: November 30, 2000 (20001130)
Inventor: KATAYANAGI HIROSHI
Applicant: NEC MIYAGI LTD
Application No.: 11-135656 [JP 99135656]
Filed: May 17, 1999 (19990517)

ABSTRACT

...of a spike noise to an asymmetric digital subscriber line(ADSL) band when the spike noise is generated in a voice telephone band.

SOLUTION: The **demultiplexer** is provided with a high pass filter(HPF) 12 for passing an **ADSL** band **signal** ≥20 kHz transmitted from an **ADSL transmission** device 6, a spike noise suppression circuit 15 for transmitting a voice **telephone** band **signal** and a ringing **signal** transmitted from a **telephone** exchange 7 and suppressing the harmonic component of the ringing signal and a low pass filter(LPF) 13 for passing a transmitted voice telephone band... Di01

5/3,K/3 (Item 1 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0016514901 *Drawing available*

WPI Acc no: 2007-231127/200723

XRPX Acc No: N2007-171687

Interactive information platform for use in television system, has operation manager receiving requests for information content from television users and assigning one of processors to establish interactive session for users

Patent Assignee: ASKENAS M S (ASKE-I); BROWN G E (BROW-I); ICTV INC (ICTV-N); LAUDER G M (LAUD-I)

Inventor: ASKENAS M S; BROWN G E; LAUDER G M; ASKENAS M; BROWN G; LAUDER G

Patent Family (5 patents, 112 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20070011717	A1	20070111	US 2005176953	A	20050706	200723	B
			US 2005234872	A	20050923		
WO 2007008319	A1	20070118	WO 2006US22534	A	20060609	200723	E
EP 1902583	A1	20080326	EP 2006772735	A	20060609	200824	E
			WO 2006US22534	A	20060609		
KR 2008024189	A	20080317	WO 2006US22534	A	20060609	200864	E
			KR 2008700293	A	20080104		
JP 2009500908	W	20090108	WO 2006US22534	A	20060609	200906	E
			JP 2008519330	A	20060609		

Original Publication Data by AuthorityArgentina**Publication No. ...Claims:**CLAIM 3]
The conversational television system which is the conversational television system equipped with the conversational information platform followed claim 1, and **demultiplexes** the information contents relating to a plurality of sessions in which each session relates to the discrete television, and more includes the **digital subscriber line** multiplexer distributing the requested **information** contents through the **telephone** line in the television relating to session...

5/3,K/4 (Item 2 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0010855615 *Drawing available*

WPI Acc no: 2001-474416/200151

Multiplexer having highly-concentrated structure in asymmetrical digital subscriber line system

Patent Assignee: HYUNDAI NETWORKS INC (HYUN-N); HYNIX SEMICONDUCTOR INC (HYNX)

Inventor: KIM H R

Patent Family (2 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
KR 2001011659	A	20010215	KR 199931135	A	19990729	200151	B
KR 308461	B	20011107	KR 199931135	A	19990729	200240	E

Alerting Abstract ...signals, then transmits the serial electrical signals to the DS-3 multiplexing module(1100). Many asymmetrical digital subscriber line(ADSL)

multiplexing modules(1300) multiplex and **demultiplex** inputted **ADSL** modulation **data** streams into ATM cell **data**. Many multiplexing port split modules(1400) perform frequency division multiplexing and filtering processes for the **ADSL** modulation **data** streams and analog **telephone signals**. An **ADSL** multiplexing block control module(1500) monitors capacities of every functional module to detect failures and defects, and preserves a system, then transmits failure information/capacity...

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0010314269 *Drawing available*
 WPI Acc no: 2000-628429/200060
 XRPX Acc No: N2000-465601
Fiber-optic subscriber transmission system
 Patent Assignee: NEC CORP (NIDE)
 Inventor: SHIBUTANI M; SHIBUYA M

Patent Family (5 patents, 9 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2000064196	A1	20001026	WO 2000JP2532	A	20000418	200060	B
JP 2000308101	A	20001102	JP 1999111417	A	19990419	200061	E
AU 200038391	A	20001102	AU 200038391	A	20000418	200107	E
EP 1176837	A1	20020130	EP 2000917351	A	20000418	200216	E
			WO 2000JP2532	A	20000418		
CN 1346577	A	20020424	CN 2000806156	A	20000418	200251	E

Alerting Abstract ...and send them to the terminal office through optical fiber cables. The terminal office receives the light signals and extracts the original subscriber signals by **demultiplexing** and D/A conversion of the received light **signals**. **Telephone signals** and xDSL (x **digital subscriber line**) **signals**, which are multiplexed in the subscriber **signals**, are separated by a splitter and terminated by a telephone switch and an xDSL access multiplexer, respectively. Original Publication Data by AuthorityArgentina**Publication No. ...Original Abstracts:**office through optical fibers. Remote nodes convert the signals sent by subscribers through telephone lines into digital signals. Then, the remote nodes convert the digital **signals** to light signals by time-division multiplexing and send them to the terminal office through optical fiber cables. The terminal office receives the light signals and extracts the original subscriber signals by demultiplexing and D/A conversion of the received light signals. Telephone signals and xDSL (x **digital subscriber line**) **signals**, which are multiplexed in the subscriber **signals**,are **separated** by a splitter **and terminated by a** telephone switch and an xDSL access **multiplexer**, respectively...

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0009777229 *Drawing available*
 WPI Acc no: 2000-065431/200006
 XRPX Acc No: N2000-051294

DSL modulator operation initiation system of modem for high speed digital communication - has rectification and smoothing circuit which rectifies vocal band signal from telephone switching network such that rectified signal supplies power for modulator operation

Patent Assignee: JAPAN AVIATION ELTRN IND LTD (NIAV); NIPPON KOKU DENSHI KOGYO KK (NIAV)

Inventor: ANDO N; ANDOU N; ISHIGAMI M

Patent Family (6 patents, 25 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 11284773	A	19991015	JP 199885363	A	19980331	200006	B
WO 1999052268	A1	19991014	WO 1999JP1651	A	19990331	200006	E
AU 199930532	A	19991025	AU 199930532	A	19990331	200011	E
EP 984612	A1	20000308	EP 1999912052	A	19990331	200017	E
			WO 1999JP1651	A	19990331		
AU 729830	B	20010208	AU 199930532	A	19990331	200113	E
KR 2001012580	A	20010215	KR 1999710537	A	19991115	200154	E

Original Publication Data by AuthorityArgentina**Publication No. ...Original Abstracts:**Un repartiteur (11) de service telephonique ordinaire **demultiplexe/** combine un **signal** de service **telephonique** ordinaire et un **signal** DSL (**de** communication numerique grande vitesse). **Un** terminal DSL **du** repartiteur (11) du **service telephonique** ordinaire est connecte a un modulateur/demodulateur (14) DSL. Un convertisseur (15) de **courant** continu transforme un **signal** (Sa) de service **telephonique ordinaire** dirige vers un terminal et provenant d'un **commutateur** (21) d'une **station** (20) de service de telecommunications en une tension de courant continu predeterminee, qui sert de puissance de fonctionnement au modulateur/ demodulateur (14) DSL. De cette...

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 DIALOG(R)File 350: Derwent WPIX
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0007910828 *Drawing available*

WPI Acc no: 1996-479117/199648

XRPX Acc No: N1996-404069

Multiplexing and demultiplexing of analog message telephone service signal and ADSL datastream - multiplexing signals for transmission on twisted pair line, and converting signals to digital form and embedding in ADSL datastream

Patent Assignee: ALCATEL (COGE); ALCATEL BELL NV (COGE); ALCATEL NV (COGE)

Inventor: DE BEECK E C J O; MESTDAGH D J G; OP DE BEECK E C J; REUSENS P P F; SPRUYT P

Patent Family (7 patents, 17 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 740451	A1	19961030	EP 1995201040	A	19950424	199648	B
AU 199650657	A	19961107	AU 199650657	A	19960415	199701	E
AU 706604	B	19990617	AU 199650657	A	19960415	199935	E
DE 29522183	U1	20000615	DE 29522183	U	19950424	200035	E
			EP 1995201040	U	19950424		
EP 740451	B1	20010606	EP 1995201040	A	19950424	200133	E
ES 2158035	T3	20010901	EP 1995201040	A	19950424	200161	E
DE 69525238	E	20020314	DE 69525238	A	19950424	200226	E
			EP 1995201040	A	19950424		

Multiplexing and demultiplexing of analog message telephone service signal and ADSL datastream... **Original Titles:**Verfahren, Schnittstellenmodule und Telefonnetz zum Multiplexen und **Demultiplexen** eines analogen MTS- (**Message Telephone Service**)-**Signals** und eines **ADSL**- (**Asymmetric Digital Subscriber Line**) - Datenstroms... ..Method, interface modules and telephone network for multiplexing and **demultiplexing** an analog MTS (**message telephone service**) **signal** and an **ADSL** (**asymmetric digital subscriber line**) datastream... ..Procede, modules d'interface et reseau telephonique pour multiplexage et **demultiplexage** d'un **signal** analogique MTS (**service de message de telephonie**) et un flux de donnees **ADSL** (**ligne d'abonne numerique, asymetrique**)... ..Method, interface modules and telephone network for multiplexing and **demultiplexing** an analog MTS (**message telephone service**) **signal** and an **ADSL** (**asymmetric digital subscriber line**) datastream... ..Procede, modules d'interface et reseau telephonique pour multiplexage et **demultiplexage** d'un **signal** analogique MTS (**service de message de telephonie**) et un flux de donnees **ADSL** (**ligne d'abonne numerique, asymetrique**) **Alerting Abstract** ...The method for multiplexing and **demultiplexing** an analog **message telephone** service (MTS) **signal** (TS) comprising and analog speech signal (AS) as well as telephone service signalling (TSS) and an asymmetric **digital subscriber line** (**ADSL**) datastream (AD) for simultaneous **transmission** over a **transmission** line involves digitally converting the analog signal. The digital signal (DS, TSC) is combined with a second signal, and is embedded in the ADSL data... Original Publication Data by

AuthorityArgentina**Publication No. ...Claims:**1. A method for multiplexing and **demultiplexing** an analog MTS (Message Telephone Service) signal (TS), comprising analog speech (AS) as well as telephone service signalling (TSS), and an ADSL (Asymmetric Digital Subscriber... line (TL),and that said demultiplexing comprises a third step wherein said transmit signal (S) is split up into said digital MTS (Message Telephone Service) **signal** (DS, TSC) and said **ADSL (Asymmetric Digital Subscriber Line) datastream (AD)**, and a fourth step wherein said digital MTS (**Message Telephone Service) signal** (DS, TSC) is converted **into said analog MTS (Message Telephone Service) signal** (TS).

5/3,K/8 (Item 6 from file: 350)
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0007710968 *Drawing available*

WPI Acc no: 1996-333425/199633

XRPX Acc No: N1996-281015

Video on demand over existing telephone wiring distribution system - has side interface unit located at site remote from central office while source of video information is connected to side interface unit using broadband communication link

Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)

Inventor: KOSTRESKI B W

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5534912	A	19960709	US 1994233579	A	19940426	199633	B

Original Publication Data by AuthorityArgentina**Publication No. ...Original**

Abstracts:analog optical fiber. The composite spectrum is split and applied individually to channel selection mixers associated with the subscribers serviced by the intermediate distribution point. **Telephone signals** (POTS) are **combined at** the intermediate distribution point into the **ADSL signal** and transmitted **with the** video, to an **ADSL multiplexer/demultiplexer** at **the** subscriber's location. In the reverse direction, channel direction/change signals are split from the composite received from the subscriber's location at the intermediate distribution point...

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06746801 ****Image available****

DEMULTIPLEXER FOR ADSL AND TRANSMISSION SYSTEM USING THE DEMULTIPLEXER

Pub. No.: 2000-332656 [JP 2000332656 A]

Published: November 30, 2000 (20001130)

Inventor: KATAYANAGI HIROSHI

Applicant: NEC MIYAGI LTD

Application No.: 11-135656 [JP 99135656]

Filed: May 17, 1999 (19990517)

International Class: H04B-003/02; H03H-007/06; H04M-011/06

ABSTRACT

PROBLEM TO BE SOLVED: To reduce the influence of a spike noise to an asymmetric digital subscriber line(ADSL) band when the spike noise is generated in a voice telephone band.

SOLUTION: The **demultiplexer** is provided with a high pass filter(HPF) 12 for passing an **ADSL band signal** ≥ 20 kHz transmitted from an **ADSL transmission device 6**, a spike noise suppression circuit 15 for transmitting a voice **telephone band signal** and a ringing **signal** transmitted from a **telephone exchange 7** and suppressing the harmonic component of the ringing signal and a low pass filter(LPF) 13 for passing a transmitted voice **telephone band signal** ≤ 4 kHz and the ringing **signal**, multiplexing the passed **signals** with the **ADSL band signal** passed through the HPF 12, transmitting the multiplexed signal to a transmission line 4, passing a signal ≤ 4 kHz out of a mixed signal transmitted from the transmission line 4, and transmitting the passed signal to the exchange 7. A signal ≥ 20 kHz out of the mixed signal interrupted by the LPF 13 is transmitted to an **ADSL transmission device 6** through the HPF 12.

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04184227 **Image available**

OPTICAL DIGITAL SUBSCRIBER LINE MULTIPLEX TRANSMISSION SYSTEM

Pub. No.: 05-175927 [JP 5175927 A]

Published: July 13, 1993 (19930713)

Inventor: KANEZASHI YOSHIO

Applicant: FUJITSU LTD [000522] (A Japanese Company or Corporation), JP (Japan)

Application No.: 03-344177 [JP 91344177]

Filed: December 26, 1991 (19911226)

International Class: [5] H04J-003/04; H04J-003/00; H04Q-003/42; H04Q-003/52; H04Q-003/60; H04Q-011/04

JAPIO Class: 44.2 (COMMUNICATION -- Transmission Systems); 44.4 (COMMUNICATION -- Telephone)

Journal: Section: E, Section No. 1452, Vol. 17, No. 583, Pg. 163, October 22, 1993 (19931022)

ABSTRACT

PURPOSE: To select number of mount channels of a multiplexer section of a remote terminal station and a **demultiplexer** section of an exchange station in response to number of mounted telephone sets to a distributor with respect to an optical **digital subscriber line** multiplex **transmission** system.

CONSTITUTION: The optical **digital subscriber line** multiplex **transmission** system is provided with plural distributors 1, 2, 3 using a multiplexer section to multiplex a **signal** from plural **telephone** sets and sending the multiplexed signal to a remote terminal station 20 via an optical digital subscriber line and with the remote terminal station 20 using a multiplexer section 20 to multiplex further the signal from the distributors 1, 2, 3 and sending the multiplexed signal to an exchange station 40 through a transmission line. Then each of the distributors 1, 2, 3 is provided with a channel allocation connection means 10 connecting a telephone line of a telephone set hooked off early to a channel section of the multiplexer section in the ascending order (from channel 1), and the remote terminal station 20 is provided with an allocation means 30 allocating a signal of the hooked-off telephone set sequentially in the order of idle channels of the multiplex section 26.

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0013274744 *Drawing available*

WPI Acc no: 2003-360812/200334

Device and method for transmitting digital voice channel of asymmetric digital subscriber line system

Patent Assignee: KT CORP (KTKT)

Inventor: BAEK G T; JIN Y M; KIM D S; CHIN Y M; KIM T S

Patent Family (2 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
KR 2003003413	A	20030110	KR 200139152	A	20010630	200334	B
KR 701761	B1	20070329	KR 200139152	A	20010630	200830	E

Alerting Abstract KR A

NOVELTY - A device and a method for transmitting a digital voice channel of an ADSL

(Asymmetric **Digital Subscriber Line**) system are provided to convert voice **signals** of the **ADSL** system into digital **signals** and then to multiplex and transmit the converted signals.

DESCRIPTION - A V-channel module (103) connected to an ATU-R (**ADSL Transmission** Unit-Remote) unit converts voice **signals** from a **telephone** set (101) into digital signals, and converts digital voice signals from a V-channel connector (105) into analog voice signals for transmitting them to the telephone set (101). The first DLDMT (Dual Link Discrete Multi Tone) module (107) transmits the digital voice signals from the V-channel module (103) through the first low pass processor (108). The second DLDMT module (117) transmits the digital voice signals from the first DLDMT module (107) through the second low pass processor (118), and transmits the digital voice signals from the V-channel connector (105) to the first DLDMT module (107). And a V-5 multiplexing module (112) connected to an **ADSL** connection unit (111) multiplexes the digital voice **signals** from the second DLDMT module (117) for transmission to an external exchange, and **demultiplexes** the digital voice signals from the external exchange to the second DLDMT module (117).

Title Terms /Index Terms/Additional Words: DEVICE; METHOD; TRANSMIT; DIGITAL; VOICE; CHANNEL; ASYMMETRIC; SUBSCRIBER; LINE; SYSTEM

9/5/7 (Item 4 from file: 350)
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0012743661 *Drawing available*

WPI Acc no: 2002-596496/200264

Broadband data transmission apparatus for sends data using bidirectional Asymmetric Digital Subscriber Line (ADSL) transmission system

Patent Assignee: HYUNDAI NETWORKS INC (HYUN-N)

Inventor: LEE S B

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
KR 2002018728	A	20020309	KR 200051984	A	20000904	200264	B

Alerting Abstract KR A

NOVELTY - An apparatus for transmitting broadband **data** using a bidirectional **ADSL**(Asymmetric **Digital Subscriber Line**) **transmission** apparatus is provided to transmit the broadband data with Nx(5-9)Mbps level by using a plurality of bidirectional **ADSL transmission** apparatuses and **telephone** lines and multiplexing ATM(Asynchronous Transfer Mode) cells in the last output terminal to be composed as one data path.

DESCRIPTION - A multichannel ATM cell multiplexer(10) multiplexes a plurality of ATM cells inputted through a plurality of bidirectional **ADSL transmission** modules(30-

1(similar)30-n) and outputs one ATM cell to the last output terminal. A multichannel ATM cell **demultiplexer**(20) distributes a plurality of ATM cells inputted through an ATM cell bus to be suitable for sequence and outputs the distributed ATM cells to a plurality of bidirectional **ADSL transmission** modules(30-1(similar)30-n). A plurality of bidirectional **ADSL transmission** modules(30-1(similar)30-n) bidirectionally secure a same band, multiplexes the ATM cells in the last output terminal, and perform a bidirectional same band service. A system control unit(40) controls the multichannel ATM cell **demultiplexer** (20) and a plurality of bidirectional **ADSL transmission** modules(30-1(similar)30-n).

Title Terms /Index Terms/Additional Words: BROADBAND; DATA; TRANSMISSION; APPARATUS; SEND; BIDIRECTIONAL; ASYMMETRIC; DIGITAL; SUBSCRIBER; LINE; SYSTEM

9/5/8 (Item 5 from file: 350)
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0012704849 *Drawing available*
 WPI Acc no: 2002-556168/200259

Digital subscriber line voice-grade telephone information communication for communication network, involves coupling digital subscriber line compressed information with voice telephone link

Patent Assignee: VERIZON SERVICES CORP (VEZN)

Inventor: BARTHOLOMEW D L; FARRIS R D; HUNTER D D; MILLET R I

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6400708	B1	20020604	US 1998161276	A	19980928	200259	B

Alerting Abstract US B1

NOVELTY - A **digital subscriber line** compressed **information** of multiplexed **data** is coupled with a voice telephone link extended through a switch (41) to a distant **telephone** station. The multiplexed **data** is transported through a carrier system coupled between a line (11₁-11₃) and the switch. The signaling data channel is multiplexed to form the multiplexed data.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- A. a communication network;
- B. a digital communication signal carrier system.

USE - For communication network e.g. integrated services digital network.

ADVANTAGE - Ensures normal voice grade **telephone** communications over signaling **data** channel of **digital subscriber line**. Ensures fast and efficient **data** communications. Does not require customer to buy another **telephone** line for **data**

traffic. Ensures efficient utilization channel capacity.

DESCRIPTION OF DRAWINGS - The figure shows the block diagram of a communication system.

11₁ - 11₃ Line

41 Switch

Title Terms /Index Terms/Additional Words: DIGITAL; SUBSCRIBER; LINE; VOICE; GRADE; TELEPHONE; INFORMATION; COMMUNICATE; NETWORK; COUPLE; COMPRESS; LINK

9/5/9 (Item 6 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0011111910 *Drawing available*

WPI Acc no: 2002-047958/200206

Adsl system

Patent Assignee: HYNIX SEMICONDUCTOR INC (HYNX)

Inventor: JU G H

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
KR 2001057404	A	20010704	KR 199960618	A	19991222	200206	B

Alerting Abstract KR A

NOVELTY - An ADSL(Asynchronous Digital Subscriber Line) system is provided to implement a built-in type splitter of an ATU-R(ADSL Terminal Unit Central Office Receive Unit) in an ATU-modem, so that it is not needed to additionally install the splitter for thereby obtaining an easier installation and decreasing the fabrication cost of a product.

DESCRIPTION - ATU-Rs(20,20') include row pass filters(21, 22) for filtering an audio band from an audio **signal** inputted through **telephones**(10,10'), voice CODECs(22,22') for compressing an audio band signal filtered by the low pass filters(21,21'), **ADSL** packetizers(23,23') for packet-processing the **data** inputted from the PC(11) through the Ethernet. High pass filers(24,24') for filtering the voice data packet-processed based on a high band method by the packetizers(23,23') or the Ethernet data and outputting as a bit stream. The ATU-C(30) includes a high pass filter(31) for filtering the bit stream from the high pass filters(24,24') of the ATU-R(20,20') based on the high band method, a multiplexor(32) for selectively outputting the compressed voice bit stream and the bit stream with respect to the Ethernet data by **demultiplexing** the bit stream with respect to the compressed voice data filtered by the high pass filter(31) or the Ethernet data traffic, and a voice codec(33) for recovering the compressed voice data from the multiplexor(32) and transferring to the PSTN(Public Switched Telephone Network).

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0010855615 *Drawing available*
WPI Acc no: 2001-474416/200151

Multiplexer having highly-concentrated structure in asymmetrical digital subscriber line system

Patent Assignee: HYUNDAI NETWORKS INC (HYUN-N); HYNIX SEMICONDUCTOR INC (HYNX)

Inventor: KIM H R

Patent Family (2 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
KR 2001011659	A	20010215	KR 199931135	A	19990729	200151	B
KR 308461	B	20011107	KR 199931135	A	19990729	200240	E

Alerting Abstract KR A

NOVELTY - A multiplexer having a high-concentrated structure in an asymmetrical digital subscriber line(ADSL) system is provided to convert many **ADSL** subscriber **data** streams into asynchronous transfer mode(ATM) cells to multiplex the ATM cells with a digital **signal** level3(DS-3) in an **ADSL** multiplexing block, and to multiplex the ATM cells with a synchronous transfer module level-1(STM-1) in the ADSL multiplexing block, so as to highly concentrate many ADSL subscribers at a low cost and to efficiently utilize a network transmission bandwidth of a multiplexer.

DESCRIPTION - A digital signal level-3(DS-3) multiplexing module(1100) multiplexes inputted ATM cell traffics with a DS-3 frame to output the ATM cell traffics as serial electrical signals, or **demultiplexes** ATM cells of the DS-3 frame. A DS-3 transceiver module(1200) transmits the serial electrical signals to an unshielded twisted pair cable, and converts signals received from the unshielded twisted pair cable into serial electrical signals, then transmits the serial electrical signals to the DS-3 multiplexing module(1100). Many asymmetrical digital subscriber line(ADSL) multiplexing modules(1300) multiplex and **demultiplex** inputted **ADSL** modulation **data** streams into ATM cell **data**. Many multiplexing port split modules(1400) perform frequency division multiplexing and filtering processes for the **ADSL** modulation **data** streams and analog **telephone signals**. An **ADSL** multiplexing block control module(1500) monitors capacities of every functional module to detect failures and defects, and preserves a system, then transmits failure information/capacity reporting information to perform a test function of a failure-generated point. An Ethernet transceiver module(1600) generates an electrical signal for transmitting Ethernet frame data to a 10-base T Ethernet cable, to transmit management information through an Ethernet local area network(LAN). A cell bus clock module(1700) supplies clock signals to each module. An ATM cell bus module(1800) supplies a path for transmitting the ATM cell data and

control signals between the modules, and supplies a path for transmitting a board rupturing and a reference clock, then supplies an analog **transmission** path for transmitting **ADSL** modulation **signals** to supply a path for providing a minus 48Vdc power.

Title Terms /Index Terms/Additional Words: MULTIPLEX; HIGH; CONCENTRATE; STRUCTURE; ASYMMETRIC; DIGITAL; SUBSCRIBER; LINE; SYSTEM

9/5/11 (Item 8 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0010697141 *Drawing available*
WPI Acc no: 2001-307213/200132
XRPX Acc No: N2001-219773

Digital carrier telephony system has remote drop unit connected to digital carrier line for inserting/retrieving one of subscriber channels into/from multiplexed subscriber channel

Patent Assignee: CONKLIN CORP (CONK-N)
Inventor: KILGORE J M; MILLIRON D B; POIRIER D C

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6208670	B1	20010327	US 199740382	P	19970310	200132	B
			US 199836499	A	19980306		

Alerting Abstract US B1

NOVELTY - Central office terminal (COT) sends outgoing digital carrier line signal based on multiplexing subscriber channel of **telephony signal** received from CO and also sends **telephony signal** to CO based on **demultiplexing** subscriber channel of incoming digital carrier line signal. A remote drop unit inserts/retrieves one of subscriber channels into/from multiplexed subscriber channel.

DESCRIPTION - Central office terminal (COT) is connected between central office (CO) (3) and one end of digital carrier line.

USE - Distributed digital carrier telephony system for supporting delivery of **telephone** and **data** services to limited set of subscribers in remote location such as rural region.

ADVANTAGE - Reduces shortage of available of copper wire pair for analog direct connection and also reduces lack of electric power consumption through digital carrier telephone.

DESCRIPTION OF DRAWINGS - The figure shows the block diagram of digital carrier telephony system.

3 Central office

Title Terms /Index Terms/Additional Words: DIGITAL; CARRY; TELEPHONE;

SYSTEM; REMOTE; DROP; UNIT; CONNECT; LINE; INSERT; RETRIEVAL; ONE;
SUBSCRIBER; CHANNEL; MULTIPLEX

9/5/12 (Item 9 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0010496427 *Drawing available*
WPI Acc no: 2001-097305/200111
XRPX Acc No: N2001-074131

Splitter for asymmetric digital subscriber line used for transmission system has higher frequency suppression circuit which clamps voltage of higher frequency component of audio telephone band signal

Patent Assignee: NEC MIYAGI LTD (NIDE)
Inventor: KATAYANAGI H

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 2000332656	A	20001130	JP 1999135656	A	19990517	200111	B

Alerting Abstract JP A

NOVELTY - A higher frequency suppression circuit (15) clamps the voltage of higher frequency component of an audio **telephone band signal** and transmits the higher frequency component to a low-pass filter (13), when an audio **telephone band signal** transmitted to the low-pass filter is an audio **telephone band signal** that comprises higher frequency component.

DESCRIPTION - The audio **telephone band signal** and an **ADSL band signal** are combined and transmitted. The low-pass filter transmits the signal that passes through it as the audio **telephone band signal**, and the signal cut-off by the low-pass filter is transmitted to a high-pass filter (12). The signal that passes to the high-pass filter is transmitted as an **ADSL band signal**. An INDEPENDENT CLAIM is also included for a **transmission system** using splitter for **ADSL**.

USE - For asymmetric **digital subscriber line (ADSL)** used for **transmission system**.

ADVANTAGE - Reduces influence of high frequency component imparted to **ADSL band** at the time of stoppage of **transmission** of ringing **signal**. Makes audio **telephone band** and **ADSL band** coexist on a pair of telephone cables.

DESCRIPTION OF DRAWINGS - The figure shows the block diagram of the **transmission system** using the splitter for **ADSL** and another splitter.

12 High-pass filter

13 Low-pass filter

15 Higher frequency suppression circuit

Title Terms /Index Terms/Additional Words: SPLIT; ASYMMETRIC; DIGITAL;
SUBSCRIBER; LINE ; TRANSMISSION; SYSTEM; HIGH; FREQUENCY; SUPPRESS;

CIRCUIT; CLAMP; VOLTAGE; COMPONENT; AUDIO; TELEPHONE; BAND; SIGNAL

9/5/13 (Item 10 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0010314269 *Drawing available*

WPI Acc no: 2000-628429/200060

XRPX Acc No: N2000-465601

Fiber-optic subscriber transmission system

Patent Assignee: NEC CORP (NIDE)

Inventor: SHIBUTANI M; SHIBUYA M

Patent Family (5 patents, 9 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2000064196	A1	20001026	WO 2000JP2532	A	20000418	200060	B
JP 2000308101	A	20001102	JP 1999111417	A	19990419	200061	E
AU 200038391	A	20001102	AU 200038391	A	20000418	200107	E
EP 1176837	A1	20020130	EP 2000917351	A	20000418	200216	E
			WO 2000JP2532	A	20000418		
CN 1346577	A	20020424	CN 2000806156	A	20000418	200251	E

Alerting Abstract WO A1

NOVELTY - A fiber-optic subscriber transmission system is provided for accommodating a plurality of **digital subscriber line signals** and **telephone signals**. A plurality of subscribers is connected through telephone lines with remote nodes, which are connected with a terminal office through optical fibers. Remote nodes convert the signals sent by subscribers through **telephone** lines into digital **signals**. Then, the remote nodes convert the digital signals to light signals by time-division multiplexing and send them to the terminal office through optical fiber cables. The terminal office receives the light signals and extracts the original subscriber signals by **demultiplexing** and D/A conversion of the received light **signals**. **Telephone signals** and xDSL (x **digital subscriber line**) **signals**, which are multiplexed in the subscriber **signals**, are separated by a splitter and terminated by a telephone switch and an xDSL access multiplexer, respectively.

USE - Fiber-optic subscriber transmission system.

Title Terms /Index Terms/Additional Words: OPTICAL; SUBSCRIBER;
TRANSMISSION; SYSTEM

9/5/14 (Item 11 from file: 350)
 DIALOG(R)File 350: Derwent WPIX
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0009777229 *Drawing available*
 WPI Acc no: 2000-065431/200006
 XRPX Acc No: N2000-051294

DSL modulator operation initiation system of modem for high speed digital communication - has rectification and smoothing circuit which rectifies vocal band signal from telephone switching network such that rectified signal supplies power for modulator operation

Patent Assignee: JAPAN AVIATION ELTRN IND LTD (NIAV); NIPPON KOKU DENSHI KOGYO KK (NIAV)

Inventor: ANDO N; ANDOU N; ISHIGAMI M

Patent Family (6 patents, 25 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 11284773	A	19991015	JP 199885363	A	19980331	200006	B
WO 1999052268	A1	19991014	WO 1999JP1651	A	19990331	200006	E
AU 199930532	A	19991025	AU 199930532	A	19990331	200011	E
EP 984612	A1	20000308	EP 1999912052	A	19990331	200017	E
			WO 1999JP1651	A	19990331		
AU 729830	B	20010208	AU 199930532	A	19990331	200113	E
KR 2001012580	A	20010215	KR 1999710537	A	19991115	200154	E

Alerting Abstract JP A

NOVELTY - A POTS splitter (1) divides or couples POTS **signal** and **DSL signal**. A **DSL** modulator (4) is connected to **DSL** terminal of splitter. A rectification and smoothing circuit (5) is connected to POTS terminal to rectify and smooth the vocal band signal (Sa') such that it is used as a power supply to DSL modulator.

USE - For initiating the operation of modulator in DSL modem between telephone lines and LAN for high speed digital communication.

ADVANTAGE - Since a smoothing and rectification circuit is used, even at the time of service interruption DSL modulator is operated without reserve power supply.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of DSL modulator. (1) POTS splitter; (4) **DSL** modulator; (5) Smoothing circuit; (Sa') Vocal band **signal**.

Title Terms /Index Terms/Additional Words: MODULATE; OPERATE; INITIATE; SYSTEM; MODEM; HIGH; SPEED; DIGITAL; COMMUNICATE; RECTIFY; SMOOTH; CIRCUIT; VOICE; BAND; SIGNAL; TELEPHONE; SWITCH; NETWORK; SUPPLY; POWER

9/5/15 (Item 12 from file: 350)
 DIALOG(R)File 350: Derwent WPIX
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0009581610 *Drawing available*

WPI Acc no: 1999-529452/199945

Related WPI Acc No: 2002-314855; 2003-379261; 2006-391144; 2006-435277

XRPX Acc No: N1999-392325

Apparatus located near to customer premise for facilitating communications between central office and several devices with apparatus having network interface unit with enclosure near premises

Patent Assignee: AT & T CORP (AMTT); GERSZBERG I (GERS-I); MILLER R R (MILL-I); RUSSELL J E (RUS-I); WALLACE E L (WALL-I); AT&T INTELLECTUAL PROPERTY II LP (AMTT)

Inventor: GERSZBERG I; MILLER R R; RUSSEL J E; RUSSELL J E; WALLACE E L

Patent Family (8 patents, 27 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 930800	A2	19990721	EP 1998303476	A	19980501	199945	B
CA 2235690	A1	19990630	CA 2235690	A	19980423	199952	E
CA 2235690	C	20010807	CA 2235690	A	19980423	200148	E
US 6424646	B1	20020723	US 19971417	A	19971231	200254	E
US 20040151212	A1	20040805	US 19971417	A	19971231	200452	E
			US 2001963655	A	20010927		
			US 2003744385	A	20031223		
US 7376142	B2	20080520	US 19971417	A	19971231	200834	E
			US 2001963655	A	20010927		
			US 2003744385	A	20031223		
US 20080225901	A1	20080918	US 19971417	A	19971231	200863	E
			US 2001963655	A	20010927		
			US 2003744385	A	20031223		
			US 2008154045	A	20080520		
US 7809005	B2	20101005	US 2008154045	A	20080520	201065	E

Alerting Abstract EP A2

NOVELTY - New architecture utilizes video phone, etc., to give new services to end users. Intelligent services director near customer premises multiplexes and coordinates digital services on single twisted pair line. Facilities management platform in local telephone network's central office routes data to interexchange company network. Couples network server platform to FMP giving new and better services.

DESCRIPTION - New and better services are provided from interexchange companies from those services provided by local network.

USE - For separating analog voice calls from other **data** services such as Ethernet transported over **digital subscriber line** modems.

ADVANTAGE - Architecture utilizes video phone, etc., to give new services to end users.

DESCRIPTION OF DRAWINGS - The drawing shows a hybrid fiber twisted pair local loop architecture.

Title Terms /Index Terms/Additional Words: APPARATUS; LOCATE; CUSTOMER; FACILITATE; COMMUNICATE; CENTRAL; OFFICE; DEVICE; NETWORK; INTERFACE; UNIT; ENCLOSE; PREMISES

9/5/16 (Item 13 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0009378160 *Drawing available*

WPI Acc no: 1999-312794/199926

XRPX Acc No: N1999-233647

High bit rate communication system

Patent Assignee: GODIGITAL TELECOM (GODI-N)

Inventor: AKERS F I

Patent Family (1 patents, 19 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1999021311	A1	19990429	WO 1997US18686	A	19971020	199926	B

Alerting Abstract WO A1

NOVELTY - System comprises a twisted cable pair with line-powering capability, a signal provider for multiplexing two or more ISDN signals and one or more standard telephone service (STS) channels, and a signal subscriber **demultiplexing** and regenerating the ISDN signals and STS channels and connecting a second end of the twisted cable pair to remote premises. The maximum twisted cable pair length is 16kft, offering roughly 1.2k maximum loop resistance from the signal provider to the signal subscriber and back.

USE - System is for high speed digital communication, particularly transportation of two ISDN **signals** and a standard **telephone** service **signal** over a twisted pair from a front end and regeneration of them at the remote end.

ADVANTAGE - System provides line powering to a remote terminal to avoid dependence upon local power and provides for a metallic standard service access in the event of electronic failures.

Title Terms /Index Terms/Additional Words: HIGH; BIT; RATE; COMMUNICATE;

SYSTEM

9/5/17 (Item 14 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0008745226 *Drawing available*

WPI Acc no: 1998-287405/199825

XRPX Acc No: N1998-225890

High bit communication system for Internet access - multiplexes digital data signal and POTS channel and sends resultant signal over twisted cable pair for demultiplexing and regeneration of signal

Patent Assignee: GODIGITAL NETWORKS CORP (GODI-N); GODIGITAL TELECOM (GODI-N)

Inventor: AKERS F I

Patent Family (5 patents, 27 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1998020669	A1	19980514	WO 1997US20111	A	19971104	199825	B
AU 199864801	A	19980529	AU 199864801	A	19971104	199841	E
US 5883941	A	19990316	US 1996747068	A	19961108	199918	E
EP 931410	A1	19990728	EP 1997949361	A	19971104	199934	E
			WO 1997US20111	A	19971104		
AU 730233	B	20010301	AU 199864801	A	19971104	200117	E

Alerting Abstract WO A1

The high bit communication system includes a twisted cable pair which supplies line power. A signal provider multiplexes one high speed digital signal and one POTS channel as well as connecting a public switched telephone network to one end of the cable pair. A signal subscriber **demultiplexes** and regenerates the digital signal and the POTS channel.

The subscriber connects a second end of the cable pair to a remote premise. The cable pair is approximately 16000 feet long and has approximately 1.2 kOhms maximum loop resistance from the signal provider to the signal subscriber and back to the signal provider.

ADVANTAGE - Uses single cable pair for transmission of two signals. Independent of local power supply. Compatible with existing system.

Title Terms /Index Terms/Additional Words: HIGH; BIT; COMMUNICATE; SYSTEM; ACCESS; MULTIPLEX; DIGITAL; DATA; SIGNAL; POT; CHANNEL; SEND; RESULT; TWIST; CABLE; PAIR; **DEMULTIPLEXER**; REGENERATE

9/5/18 (Item 15 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0008095163 *Drawing available*

WPI Acc no: 1997-192462/199717

Related WPI Acc No: 1997-192463; 1998-100680; 1998-456396; 1997-280633

XRPX Acc No: N1997-159058

Subscriber premise wireless distribution of audio-video control signals and voice - has transponders for transmission and reception of complex radio frequency signals containing broadband information

Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)

Inventor: HYLTON D L

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5613190	A	19970318	US 1995431940	A	19950501	199717	B

Alerting Abstract US A

The system has a communication network selectively providing broadband communication links. Several information service provider systems are connected to the network, for transmitting broadband digital information. A gateway connects selected provider systems to the user terminal in response to terminal control signals. The user terminal include a digital entertainment terminal for coupling to link transporting digital information and upstream/downstream control signals.

A first transponder at the premise receives and transmits radio frequency (RF) signals, including the received control signals. Broadband signals and downstream control signals are delivered to the digital entertainment terminal. A second transponder at the premise also receives and transmits RF signals, including broadband and upstream control signals. The coupling between the communication link and the digital entertainment terminal includes a pair of multiplexing/**demultiplexing** circuits, on of which is at the premise, and the other is remote from the premise.

USE/ADVANTAGE - Provides efficient system of wireless distribution of broadband information via premise.

Title Terms /Index Terms/Additional Words: SUBSCRIBER; WIRELESS; DISTRIBUTE; AUDIO; VIDEO; CONTROL; SIGNAL; VOICE; TRANSPONDER; TRANSMISSION; RECEPTION; COMPLEX; RADIO; FREQUENCY; CONTAIN; BROADBAND; INFORMATION

9/5/19 (Item 16 from file: 350)
DIALOG(R)File 350: Derwent WPIX
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0008007413 *Drawing available*

WPI Acc no: 1997-099682/199709

XRPX Acc No: N1997-082483

Electronic distribution system for near-video-on-demand - has server holding program material spooled with time offset with ADSL channel handling thread between server and replicator

Patent Assignee: VXL/HCR TECHNOLOGY CORP (VXLH-N)

Inventor: HODGE W W; TAYLOR L E

Patent Family (3 patents, 23 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5594491	A	19970114	US 1995581672	A	19951229	199709	B
WO 1997024877	A1	19970710	WO 1996US20814	A	19961226	199733	E
AU 199714318	A	19970728	AU 199714318	A	19961226	199746	E

Alerting Abstract US A

The system has a server which holds video program material in segments, which are spooled from the server to several threads. The threads carry the program with a time offset from one thread to another. There are several ADSL channels which handle the threads between the server and a device for replicating the selected threads.

There is a unit for routing the threads to the subscriber intermediate destinations. A publicly accessible network extends between the routing unit and the subscriber intermediate destinations. The ADSL channels extend between the subscriber intermediate destinations and the subscribers. The network may be the internet or the public switched telephone network, and the routing unit may be a telco switch.
USE/ADVANTAGE - Reduced expense generating each program channel/video thread.
Easier to service large demand for same program.

Title Terms /Index Terms/Additional Words: ELECTRONIC; DISTRIBUTE; SYSTEM; VIDEO; DEMAND; SERVE; HOLD; PROGRAM; MATERIAL; SPOOL; TIME; OFFSET; CHANNEL; HANDLE; THREAD; REPLICA

9/5/20 (Item 17 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0007910828 *Drawing available*

WPI Acc no: 1996-479117/199648

XRPX Acc No: N1996-404069

Multiplexing and demultiplexing of analog message telephone service signal and ADSL datastream - multiplexing signals for transmission on twisted pair line, and converting signals to digital form and embedding in ADSL datastream

Patent Assignee: ALCATEL (COGE); ALCATEL BELL NV (COGE); ALCATEL NV

(COGE)

Inventor: DE BEECK E C J O; MESTDAGH D J G; OP DE BEECK E C J; REUSENS P P F; SPRUYT P

Patent Family (7 patents, 17 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 740451	A1	19961030	EP 1995201040	A	19950424	199648	B
AU 199650657	A	19961107	AU 199650657	A	19960415	199701	E
AU 706604	B	19990617	AU 199650657	A	19960415	199935	E
DE 29522183	U1	20000615	DE 29522183	U	19950424	200035	E
			EP 1995201040	U	19950424		
EP 740451	B1	20010606	EP 1995201040	A	19950424	200133	E
ES 2158035	T3	20010901	EP 1995201040	A	19950424	200161	E
DE 69525238	E	20020314	DE 69525238	A	19950424	200226	E
			EP 1995201040	A	19950424		

Alerting Abstract EP A1

The method for multiplexing and **demultiplexing** an analog **message telephone** service (MTS) **signal** (TS) comprising and analog speech signal (AS) as well as telephone service signalling (TSS) and an asymmetric **digital subscriber line (ADSL)** datastream (AD) for simultaneous **transmission** over a **transmission** line involves digitally converting the analog signal. The digital **signal** (DS, TSC) is combined with a second **signal** , and is embedded in the **ADSL data** stream. The latter is used to generate a transmit signal (S) which is applied to the transmission line (TL).

The **demultiplexing** process involves splitting the transmission signal into component parts comprising the digital MTS (DS, TSC) ad the **ADSL signal data** stream (AD). The digital **message signal** is then converted to analog form. In the event of a fault the analog MTS signal is transmitted in its analog form to and/from the transmission line via independent link lines (L,L')

ADVANTAGE - Helps maintain telephone service even when ADSL equipment fails by using alternative path to transmit MTS independently from ADSL appts.

Title Terms /Index Terms/Additional Words: MULTIPLEX; **DEMULTIPLEXER**; ANALOGUE; MESSAGE; TELEPHONE; SERVICE; SIGNAL; TRANSMISSION; TWIST; PAIR; LINE; CONVERT; DIGITAL; FORM; EMBED; ASYMMETRIC; DIGITAL; SUBSCRIBER; LINE

9/5/21 (Item 18 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0007710968 *Drawing available*

WPI Acc no: 1996-333425/199633

XRPX Acc No: N1996-281015

Video on demand over existing telephone wiring distribution system - has side interface unit located at site remote from central office while source of video information is connected to side interface unit using broadband communication link

Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)

Inventor: KOSTRESKI B W

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5534912	A	19960709	US 1994233579	A	19940426	199633	B

Alerting Abstract US A

The system provides video signals which are distributed to end users over a telephone wiring plant of a central office using respective pairs of asymmetrical digital subscriber line (ADSL) interface units. A source side interface unit of each pair is located relatively closer to a source of video information than a subscriber side interface unit and the subscriber side interface unit of each pair is located at an end user's location.

The distribution entails locating the ADSL source side interface unit at a site remote from the central office. The source of video **information** is then connected to the **ADSL** source side interface unit using a broadband communication link.

USE/ADVANTAGE - For distributing of video **information** over existing **telephone** wiring plant facilities and to fibre optic extension of network which delivers programming to subscribers using asymmetrical digital subscriber line interfaces. Allows adapting or modifying existing telephone wiring to accommodate distribution of video information.

Title Terms /Index Terms/Additional Words: VIDEO; DEMAND; EXIST; TELEPHONE; WIRE; DISTRIBUTE; SYSTEM; SIDE; INTERFACE; UNIT; LOCATE; SITE; REMOTE; CENTRAL; OFFICE; SOURCE; INFORMATION; CONNECT; BROADBAND; COMMUNICATE; LINK

9/5/22 (Item 19 from file: 350)

DIALOG(R)File 350: Derwent WPIX

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0006322210 *Drawing available*

WPI Acc no: 1993-117887/199314

Related WPI Acc No: 1995-169769; 1997-258384; 1998-446413; 1998-495203; 1998-120214; 1996-300064; 1994-333542

XRPX Acc No: N1993-089847

Public switched telephone network for video-on-demand services - has frequency multiplexing and demultiplexing for combining and separating video and normal telephone signals in subscriber loop appts.

Patent Assignee: BELL ATLANTIC NETWORK SERVICES (BELL-N)

Inventor: CODDINGTON C D; GOLD J B; KLIKA D C; KONKLE D B; LITTERAL L A; MCHENRY J M; RICHARD A A

Patent Family (10 patents, 41 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1993006692	A1	19930401	WO 1992US6857	A	19920813	199314	B
AU 199224894	A	19930427	AU 199224894	A	19920813	199332	E
			WO 1992US6857	A	19920813		
US 5247347	A	19930921	US 1991766535	A	19910927	199339	E
ZA 199300759	A	19931027	ZA 1993759	A	19930204	199349	NCE
EP 605454	A1	19940713	EP 1992918249	A	19920813	199427	E
			WO 1992US6857	A	19920813		
JP 7502629	W	19950316	WO 1992US6857	A	19920813	199519	E
			JP 1993506034	A	19920813		
NZ 244083	A	19950328	NZ 244083	A	19920825	199519	E
AU 660710	B	19950706	AU 199224894	A	19920813	199534	E
IL 104622	A	19951127	IL 104622	A	19930204	199608	NCE
CN 1091881	A	19940907	CN 1993102489	A	19930301	199715	NCE

Alerting Abstract WO A1

The network includes a number of subscriber interfaces located at respective subscriber premises. Each interface has a local loop input mode for receiving a multiplexed signal, a splitter to separate the signal into a video **signal** and a **telephone** instrument **signal**, and output nodes for supplying the separated signals. Subscriber loops provide connectivity to respective subscriber nodes in a central office.

Interfacing circuits at the central office receive video and **telephone** instrument **signals** and produce the combined signal for reception by the subscriber equipment. A video gateway responsive to a control signal received from a subscriber **telephone** instrument provides video **signals** via a cross-connect receiving system.

ADVANTAGE - Provides video programming on demand using public switched telephone network components. Potential for multiple video sources. Allows real-time subscriber control of video programming delivery.

Title Terms /Index Terms/Additional Words: PUBLIC; SWITCH; TELEPHONE; NETWORK; VIDEO; DEMAND; SERVICE; FREQUENCY; MULTIPLEX; **DEMULTIPLEXER**; COMBINATION; SEPARATE; NORMAL; SIGNAL; SUBSCRIBER; LOOP; APPARATUS; PSTN

9/5/23 (Item 20 from file: 350)
 DIALOG(R)File 350: Derwent WPIX
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0003985573

WPI Acc no: 1987-079822/198711

Subscriber line card for PABX or exchange - uses bipolar low voltage analog and separate high voltage cards with shared CMOS digital processor

Patent Assignee: MOTOROLA INC (MOTI); SMITH R (SMIT-I)

Inventor: SMITH R

Patent Family (9 patents, 7 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1987001547	A	19870312	WO 1986GB525	A	19860904	198711	B
GB 2180430	A	19870325	GB 198522069	A	19850905	198712	E
EP 235231	A	19870909	EP 1986905346	A	19860904	198736	E
JP 63500763	W	19880317	JP 1986504626	A	19860904	198817	E
GB 2180430	B	19890823	GB 198522069	A	19850905	198934	E
EP 235231	B	19910123	EP 1986905346	A	19860904	199104	E
US 4984266	A	19910108	US 1988312378	A	19880906	199105	E
DE 3677190	G	19910228				199110	E
EP 235231	B2	19960828	EP 1986905346	A	19860904	199639	E
			WO 1986GB525	A	19860904		

Alerting Abstract WO A

The appts. comprises for each of a number of subscriber telephone lines, an analog circuit card. The card includes a relatively high voltage portion interfacing to a subscriber line and a relatively low voltage portion for performing predetermined analog functions including over-sampled analog-to-digital and digital-to-analog conversion. A single digital signal processor is time shared for each of the lines, e.g. eight subscriber lines.

The high voltage circuitry is relatively simple and the low voltage circuitry uses bipolar technology. The analog functions include two-to-four wire conversion, loop characteristic sensing, off hook detection and anti-aliasing.

ADVANTAGE - Integrated device with improved noise performance.

Title Terms /Index Terms/Additional Words: SUBSCRIBER; LINE; CARD; PABX; EXCHANGE; BIPOLAR; LOW; VOLTAGE; ANALOGUE; SEPARATE; HIGH; SHARE; CMOS; DIGITAL; PROCESSOR

9/3,K/1 (Item 1 from file: 350)
 DIALOG(R)File 350: Derwent WPIX

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0010697141 *Drawing available*

WPI Acc no: 2001-307213/200132

XRPX Acc No: N2001-219773

Digital carrier telephony system has remote drop unit connected to digital carrier line for inserting/retrieving one of subscriber channels into/from multiplexed subscriber channel

Patent Assignee: CONKLIN CORP (CONK-N)

Inventor: KILGORE J M; MILLIRON D B; POIRIER D C

Patent Family (1 patents, 1 countries)							
Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6208670	B1	20010327	US 199740382	P	19970310	200132	B
			US 199836499	A	19980306		

Original Titles:Digital carrier system for rural **telephone** and **data** applications.

Alerting Abstract ...NOVELTY - Central office terminal (COT) sends outgoing digital carrier line signal **based** on multiplexing subscriber **channel** of **telephony signal** received from CO and also sends **telephony signal** to CO **based** on **demultiplexing** subscriber **channel** of incoming digital carrier line signal. A remote drop unit inserts/retrieves one of subscriber channels into/from multiplexed subscriber channel. ...USE - Distributed digital carrier telephony system for supporting delivery of **telephone** and **data** services to limited set of subscribers in remote location such as rural region... Original Publication Data by AuthorityArgentina**Publication No. Original Abstracts:**A digital carrier telephony system for delivering voice and **data telephony** services to subscribers in rural locations having low population densities. A Central Office processes **telephony signals** having subscriber channels. A Terminal (COT), which is connected to the CO and to one end of a digital carrier line, can transmit outgoing digital carrier line signals on the digital carrier line in response to multiplexing the subscriber channels of **telephony signals** received on a wired link from the CO. The COT also can transmit **telephony signals** to the CO in response to **demultiplexing** subscriber channels of incoming digital carrier line signals received on the digital carrier line. At subscriber locations, multiple remote drop units are typically connected to... **Claims:**A distributed digital carrier telephony system, comprising:a Central Office (CO) for processing **telephony signals** comprising subscriber **channels**;a CO Terminal (COT), connected between the CO and one end of a digital carrier line comprising only a single wire pair cable, for transmitting outgoing digital carrier line signals on the digital carrier line in response to multiplexing the subscriber channels of the **telephony signals** received from the CO, **and for** transmitting the **telephony signals** to the CO in **response to demultiplexing** subscriber channels of incoming digital **carrier** line signals received on the digital carrier line, both the outgoing digital carrier line signals and the incoming digital carrier line signals comprising multiplexed subscriber... ... drop unit, connected to the digital carrier line, for inserting one of the subscriber channels into the multiplexed subscriber channels of one of the incoming **digital carrier line signals** and for retrieving one of the subscriber channels from the multiplexed subscriber

channels of one of the outgoing **digital carrier line signals**, each remote drop unit further operative to pass the incoming digital carrier line signals and the outgoing digital carrier line signals not intended for the...

5/3K/1 (Item 1 from file: 348)

01773022

Multi-function processing apparatus

Patent Assignee:

- **Brother Kogyo Kabushiki Kaisha (431491)**
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(Applicant designated States: all)

Inventor:

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- **Ohno, Hiroshi c/o Technology Planning & IP Dpt**
Brother Kogyo K. K., 15-1 Naeshiro-cho, Mizuko-ku; Nagoya-shi, Aichi-ken 467-8561; (JP)

Legal Representative:

- **Smith, Samuel Leonard (77241)**
J.A. Kemp & Co., 14 South Square, Gray's Inn; London WC1R 5JJ; (GB)

	Country	Number	Kind	Date	
Patent	EP	1445666	A1	20040811	(Basic)
Patent	EP	1445666	A1	20040811	
Application	EP	2004250597		20040204	
Priorities	JP	200327944		20030205	

Specification: ...up of the LAN terminals 13 to 17.

On the other hand, the splitter 8, which is a well known splitter used to use an **ADSL** (asymmetrical **digital subscriber line**), **demultiplexes** a **transmission signal** with a first **signal** of almost 4 kHz or less and a higher-frequency second **signal** for the **ADSL** transmitted from a splitter 19 installed at a base station into the first signal and the second signal, outputs the first **signal** to the **telephone** connection port and the second signal to the ADSL modem connection port, and on the other hand, multiplexes signals input from the connection ports and...

5/3K/2 (Item 2 from file: 348)

01569991

METHOD OF ESTABLISHING A SUBSCRIBER CONNECTION AND SYSTEM UTILISING THE METHOD

Patent Assignee:

- **Laamanen, Heikki** (4367520)
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(Proprietor designated states: all)
- **Gowda, Umesh** (4367510)
Mimerkinkuja 4 A 12; 02230 Espoo (FI)
(Proprietor designated states: all)

Inventor:

- **Laamanen, Heikki**
Nuottakuja 2 B; 02230 Espoo; (FI)
- **Gowda, Umesh**
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	Country	Number	Kind	Date	
Patent	EP	1419649	A1	20040519	(Basic)
Patent	EP	1419649	B1	20080514	
	WO	2003017634		20030227	
Application	EP	2002753100		20020814	
	WO	2002FI671		20020814	
Priorities	FI	2011665		20010817	

Specification: ...short-circuit the telephone signal.

In the reverse direction, it would be possible to use the AD converter 18 of the RAFe for converting the **telephone signal** and then filter apart the said signal after **demultiplexing** 12 in the COMUX. In practice, problems would arise because a very high-level **telephone signal** might overload the AD converter 18 so that the **DSL** modem **signal** would be distorted and bit error bursts would occur as a consequence. The telephone signal also increases the dynamic range of the AD converter input...

5/3K/3 (Item 3 from file: 348)

01400048

State monitoring method and apparatus in subscriber line test

Patent Assignee:

- **NEC CORPORATION** (236690)
7-1, Shiba 5-chome, Minato-ku; Tokyo (JP)
(Proprietor designated states: all)

Inventor:

- **Yanagi, Kazuya**
c/o NEC Corporation, 7-1, Shiba 5-chome; Minato-ku, Tokyo; (JP)

Legal Representative:

- **Vossius & Partner (100314)**
Siebertstrasse 4; 81675 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1185060	A2	20020306	(Basic)
Patent	EP	1185060	A3	20031105	
Patent	EP	1185060	B1	20070606	
Application	EP	2001120629		20010829	
Priorities	JP	2000260822		20000830	

Specification: ...a multiplexing/matching circuit 8 to which the telephone 31 and terminal 32 are connected and which executes line matching and modulates/multiplexes a voice **signal** from the telephone 31 and a data signal from the terminal 32 in different frequency bands, a demultiplexing circuit 9 for **demultiplexing** the multiplexed voice signal and data signal, a **telephone** exchange 1 for receiving the voice **signal** from the **demultiplexing** circuit 9, an **ADSL** control section 21 for receiving the **data signal** from the **demultiplexing** circuit 9, a control terminal 4 which is connected to the telephone exchange 1 to maintain and manage the **telephone** exchange 1, a **data** network 7 to which an **ADSL** apparatus 2 -is connected, a control terminal 5 which is connected to the data network 7 to maintain and manage various units subordinate to the... ...a multiplexing/matching circuit 108 to which the telephone 131 and terminal 132 are connected and which executes line matching and modulates/multiplexes a voice **signal** from the telephone 131 and a data signal from the terminal 132 in different frequency bands, a demultiplexing circuit 109 for **demultiplexing** the multiplexed voice signal and data signal, a **telephone** exchange 101 for receiving the voice **signal** from the **demultiplexing** circuit 109, an **ADSL** apparatus 102 for receiving the **data signal** from the **demultiplexing** circuit 109, a control terminal 104 which is connected to the telephone exchange 101 to maintain and manage the **telephone** exchange 101, a **data** network 107 to which the **ADSL** apparatus 102 is connected, a control terminal 105 which is connected to the data network 107 to maintain and manage various units subordinate to the... ...circuit 108. The multiplexed signal is transmitted to the multiplexing/matching circuit 108 by using different frequency bands on the same wire. The voice signal **demultiplexed** by the **demultiplexing** circuit 109 is output to the POTS control section 111, and the **data signal** to the **ADSL** control section 121. The POTS control section 111 converts the voice **signal** from the **telephone** 131 of the subscriber 103 into a digital signal, and transmits it to the PSTN (Public Switched Telephone Network) 106 through the host apparatus 112...

Specification: ...a multiplexing/matching circuit 8 to which the telephone 31 and terminal 32 are connected and which executes line matching and modulates/multiplexes a voice **signal** from the telephone 31 and a data signal from the terminal 32 in different frequency bands, a demultiplexing circuit 9 for **demultiplexing** the multiplexed voice signal and data signal, a **telephone** exchange 1 for receiving the voice **signal** from the **demultiplexing** circuit 9, an **ADSL** control section 21 for receiving the **data signal** from the **demultiplexing** circuit 9, a control terminal 4 which is connected to the telephone exchange 1 to maintain and manage the **telephone** exchange 1, a **data** network 7 to which an **ADSL** apparatus 2 -is connected, a control terminal 5 which is connected to the data network 7 to maintain and manage various units subordinate to the... ...a

multiplexing/matching circuit 108 to which the telephone 131 and terminal 132 are connected and which executes line matching and modulates/multiplexes a voice **signal** from the telephone 131 and a data signal from the terminal 132 in different frequency bands, a demultiplexing circuit 109 for **demultiplexing** the multiplexed voice signal and data signal, a **telephone** exchange 101 for receiving the voice **signal** from the **demultiplexing** circuit 109, an **ADSL** apparatus 102 for receiving the **data signal** from the **demultiplexing** circuit 109, a control terminal 104 which is connected to the telephone exchange 101 to maintain and manage the **telephone** exchange 101, a **data** network 107 to which the **ADSL** apparatus 102 is connected, a control terminal 105 which is connected to the data network 107 to maintain and manage various units subordinate to the... circuit 108. The multiplexed signal is transmitted to the multiplexing/matching circuit 108 by using different frequency bands on the same wire. The voice signal **demultiplexed** by the **demultiplexing** circuit 109 is output to the POTS control section 111, and the **data signal** to the **ADSL** control section 121. The POTS control section 111 converts the voice **signal** from the **telephone** 131 of the subscriber 103 into a digital signal, and transmits it to the PSTN (Public Switched Telephone Network) 106 through the host apparatus 112...

5/3K/4 (Item 4 from file: 348)

01305663

Method to reduce distortion of a digital data signal by a POTS ringing signal, and related telephone ringing signal generator

Patent Assignee:

- **ALCATEL** (201871)
54, rue la Boetie; 75008 Paris (FR)
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Inventor:

- **Ploumen, Franciscus Maria**
St. Laureisstraat 6; 2018 Antwerp; (BE)
- **De Clercq, Luc Josephine Theoduul**
Weverstraat 24; 9250 Waasmunster; (BE)

Legal Representative:

- **Plas, Axel (89921)**
Alcatel Bell N.V., Francis Wellesplein 1; 2018 Antwerpen; (BE)

	Country	Number	Kind	Date	
Patent	EP	1119175	A1	20010725	(Basic)
Patent	EP	1119175	B1	20021218	
Application	EP	2000400154		20000120	

Specification: ...full digital loop known for instance from the European Patent Application EP 0 740 451 entitled 'Method, Interface Modules and telephone Network for Multiplexing and **Demultiplexing** an Analog MTS (**Message Telephone Service**) **signal** and an **ADSL** (**Asymmetric Digital Subscriber Line**) Datastream' from applicant

Alcatel Bell, mutual interference between concurrently transferred **telephony signals** and digital **data** is avoided by digitising the **telephony signals** and by embedding the digitised **telephony signals** in the digital data frames that also convey the digital data. POTS signalling such as the ringing signal and the metering pulses are replaced with...

Specification: ...technique for reducing distortion based on digital signal processing which does not require the use of splitters. Accordingly, constant envelope modulation is utilized by the **DSL** modem to thereby lessen the interference between signals in the ADSL band and signals in the POTS band.

In the full digital loop known for instance from the European Patent Application EP 0 740 451 entitled 'Method, Interface Modules and telephone Network for Multiplexing and Demultiplexing an Analog MTS (**Message Telephone Service**) **signal** and an **ADSL** (Asymmetric **Digital Subscriber Line**) Datastream' from applicant Alcatel Bell, mutual interference between concurrently transferred **telephony signals** and digital **data** is avoided by digitising the **telephony signals** and by embedding the digitised **telephony signals** in the digital data frames that also convey the digital data. POTS signalling such as the ringing signal and the metering pulses are replaced with...

5/3K/5 (Item 5 from file: 348)

01297279

Central office for a full digital loop

Patent Assignee:

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(Applicant designated States: all)

Inventor:

- **Van Wonterghem, Geert Arthur Edith**
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Legal Representative:

- **Plas, Axel (89921)**
Alcatel Bell N.V., Francis Wellesplein 1; 2018 Antwerpen; (BE)

	Country	Number	Kind	Date	
Patent	EP	1111896	A1	20010627	(Basic)
Application	EP	99403244		19991221	

Specification: ...known in the art, e.g. from the European Patent Application EP 0 740 451 entitled 'Method, interface modules and telephone network for multiplexing and **demultiplexing** an analog MTS (**Message Telephone Service**) **signal** and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream'. In fact, this patent application describes a full digital loop wherein **telephone signals** are digitised and encapsulated in digital data frames to be in-band transferred. In the known full digital loop, the POTS (Plain Old Telephone Service...

5/3K/6 (Item 6 from file: 348)

01283286

Telephone system, central office installation and splitter for analog telephone signals and digital data signals

Patent Assignee:

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(Proprietor designated states: all)

Inventor:

- **Reusens, Peter Paul Frans**
Warande 121; Be/9270 Laarne; (BE)

Legal Representative:

- **Narmon, Gisele Marie Therese (83943)**
Alcatel Bell N.V. Intellectual Property Department Copernicuslaan 50; 2018
Antwerpen; (BE)

	Country	Number	Kind	Date	
Patent	EP	1102514	A1	20010523	(Basic)
Patent	EP	1102514	B1	20090121	
Application	EP	99402898		19991119	

Specification: ...receiving a ringing indication signal representative of an announcement of a POTS call, generates locally a ringing signal having the usual amplitude, and applies this **signal** to **telephone 32**. This makes it possible to use a standard telephone set with the splitter. In addition, splitter 30 separates incoming POTS and **ADSL signals**; it transmits POTS **signals** to the **telephone**, and **ADSL signals** to ADSL modem 34.

Thus, splitter 30 carries out multiplexing and **demultiplexing** of analogue **telephone signals** and digital **data** signals. It also generates and applies to the **telephone** the ringing **signal**, when a ringing indication signal is detected.

According to the invention, the use of a ringing indication signal, having lower amplitude, makes it possible to...

Specification: ...receiving a ringing indication signal representative of an announcement of a POTS call, generates locally a ringing signal having the usual amplitude, and applies this **signal** to **telephone 32**. This makes it possible to use a standard telephone set with the splitter. In addition, splitter 30 separates incoming POTS and **ADSL signals**; it transmits POTS **signals** to the **telephone**, and **ADSL signals** to ADSL modem 34.

Thus, splitter 30 carries out multiplexing and **demultiplexing** of analogue **telephone signals** and digital **data** signals. It also generates and applies to the **telephone** the ringing **signal**, when a ringing indication signal is detected.

According to the invention, the use of a ringing indication signal, having lower amplitude, makes it possible to...

5/3K/7 (Item 7 from file: 348)

01157470

Fiber optic telecommunication system employing continuous downlink, burst uplink transmission format with preset uplink guard band

Patent Assignee:

- **BROADBAND TECHNOLOGIES, INC.** (1234420)
Research Triangle Park; North Carolina (US)
(Applicant designated States: all)

Inventor:

- **Sharpe, Randall B.**
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- **Toy, James W.**
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- **Evans, Gregory M.**
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Legal Representative:

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	Country	Number	Kind	Date	
Patent	EP	1009111	A1	20000614	(Basic)
Application	EP	99121969		19901013	
Priorities	US	429083		19891030	

Specification: ...have been transmitted over the uplink fiber from the subscriber interface sites. Each of the downlink messages identifies the subscriber interface site for whom the **message** is intended and specifies which **digital subscriber line** packets are directed to it. The recipient subscriber interface site **demultiplexes** the contents of the message and (via signal interface units) routes the respective television channel **signals** and **telephony signals** to destination equipment (e.g. TV set top decoder, telephone handset).

The channel selection mechanism at the master site preferably includes an AC-coupled distribution...

5/3K/8 (Item 8 from file: 348)

00793827

Method, interface modules and telephone network for multiplexing and demultiplexing an analog MTS (message telephone service) signal and an ADSL (asymmetric digital subscriber line) datastream

Patent Assignee:

- **ALCATEL** (201876)
54, rue La Boetie; 75008 Paris (FR)
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Inventor:

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- **Spruyt, Paul**
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- **Reusens, Peter Paul Frans**
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- **op de Beeck, Edmond Celina Jozef**
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Legal Representative:

- **Narmon, Gisele Marie Therese et al (83944)**
Alcatel Bell N.V. Intellectual Property Department Francis Wellesplein 1; 2018 Antwerpen; (BE)

	Country	Number	Kind	Date	
Patent	EP	740451	A1	19961030	(Basic)
Patent	EP	740451	B1	20010606	
Application	EP	95201040		19950424	
Priorities	EP	95201040		19950424	

Specification: ...A1

The present invention relates to a method, interface modules and a telephone network for multiplexing and **demultiplexing** of an analog MTS (Message Telephone Service) **signal**, formerly known as an analog POTS (Plain Old **Telephone** Service) **signal**, and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream. The MTS (**Message Telephone** Service) **signal** comprises analog speech as well as telephone service signalling (e.g. ringing signal, metering pulses). Both the analog MTS (Message Telephone Service) signal and the... ..59 thereof, to use an ADSL/MTS splitter at each end of the two-wire transmission line to perform the necessary frequency division multiplexing and **demultiplexing**. Such an ADSL/MTS splitter is based on the use of frequency bandpass filters but due to the predefined filter requirements and the presence of telephone service signalling (e.g. ringing **signal**) which reaches high voltage levels, the **ADSL**/MTS splitter becomes very bulky and expensive.

An object of the present invention is to provide a method, interface modules and a telephone network for multiplexing and **demultiplexing** of an analog MTS (**Message Telephone Service**) **signal** and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream wherein the use of a bulky and expensive MTS/ADSL splitter, as suggested in the draft ANSI Standard, is avoided.

According to the present...the subscriber station to the central office.

The subscriber station interface module S-IM and central office interface module CO-IM include multiplexing means and **demultiplexing** means for multiplexing and **demultiplexing** an analog MTS (**Message Telephone Service**) **signal** TS and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream AD. In the figure however, only the multiplexing means of the central office interface module CO-IM and the **demultiplexing** means of the subscriber station interface module S-IM are drawn, the **demultiplexing** means of the central office interface module CO-IM and the multiplexing means of the subscriber interface module S-IM being similar.

In the following...the first switching means S1'.

Corresponding to the above described first and second implementation of the multiplexer MUX, a first and second implementation of the **demultiplexer** DEMUX will be described in the next paragraphs.

In the first implementation of the demultiplexer DEMUX represents a DMT (Discrete Multi Tone) demodulator, which forms part of a modulating/demodulating unit or DASP (DMT ADSL **Signal** Processor) unit, represented in the figure by the ADSL (Asymmetric Digital Subscriber Line) unit ADSL-U'. In this embodiment of the demultiplexer **DEMUX**, data demodulated from the above mentioned subset of carriers constitute the digital MTS (**Message Telephone Service**) **signal** comprising the digital speech DS and the telephone service code TSC, routed to the first and second **demultiplexer** output, DO1 and DO2 respectively. The **data** demodulated from other carriers constitute the **ADSL** (Asymmetric Digital Subscriber Line) datastream AD and are applied to the third output DO3 of the **demultiplexer** **DEMUX**.

In the second implementation, **demultiplexer** **DEMUX** represents the cascade connection of an ATM extracting unit, which extracts ATM (Asynchronous Transfer Mode) cells filled with the digital MTS (**Message Telephone Service**) **signal** DS, TSS from the transmit signal S, and an ATM converting unit, which converts these
Specification: ...B1

The present invention relates to a method, interface modules and a telephone network for multiplexing and **demultiplexing** of an analog MTS (Message Telephone Service) **signal**, formerly known as an analog POTS (Plain Old **Telephone Service**) **signal**, and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream. The MTS (**Message Telephone Service**) **signal** comprises analog speech as well as telephone service signalling (e.g. ringing signal, metering pulses). Both the analog MTS (Message Telephone Service) signal and the... ..59 thereof, to use an ADSL/MTS splitter at each end of the two-wire transmission line to perform the necessary frequency division multiplexing and **demultiplexing**. Such an ADSL/MTS splitter is based on the use of frequency bandpass filters but due to the predefined filter requirements and the presence of telephone service signalling (e.g. ringing **signal**) which reaches high voltage levels, the **ADSL/MTS** splitter becomes very bulky and expensive.

An object of the present invention is to provide a method, interface modules and a telephone network for multiplexing and **demultiplexing** of an analog MTS (**Message Telephone Service**) **signal** and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream wherein the use of a bulky and expensive MTS/ADSL splitter, as suggested in the draft ANSI Standard, is avoided.

According to the present...the subscriber station to the central office.

The subscriber station interface module S-IM and central office interface module CO-IM include multiplexing means and **demultiplexing** means for multiplexing and **demultiplexing** an analog MTS (**Message Telephone Service**) **signal** TS and an **ADSL** (Asymmetric **Digital Subscriber Line**) datastream AD. In the figure however, only the multiplexing means of the central office interface module CO-IM and the **demultiplexing** means of the subscriber station interface module S-IM are drawn, the **demultiplexing** means of the central office interface module CO-IM and the multiplexing means of the subscriber interface module S-IM being similar.

In the following...the first switching means S1'.

Corresponding to the above described first and second implementation of the multiplexer MUX, a first and second implementation of the **demultiplexer** DEMUX will be described in the next paragraphs.

In the first implementation of the demultiplexer DEMUX represents a DMT (Discrete Multi Tone) demodulator, which forms part of a modulating/demodulating unit or DASP (DMT ADSL **Signal** Processor) unit, represented in the figure by the ADSL (Asymmetric Digital Subscriber Line) unit ADSL-U'. In this embodiment of the demultiplexer **DEMUX**, data demodulated from the above mentioned subset of carriers constitute the digital MTS (**Message Telephone Service**) **signal** comprising the digital speech DS and the telephone service code TSC, routed to the first and second **demultiplexer** output, DO1 and DO2 respectively. The **data** demodulated from other carriers constitute the **ADSL** (Asymmetric Digital Subscriber Line) datastream AD and are applied to the third output DO3 of the **demultiplexer** **DEMUX**.

In the second implementation, **demultiplexer** **DEMUX** represents the cascade connection of an ATM extracting unit, which extracts ATM (Asynchronous Transfer Mode) cells filled with the digital MTS (**Message Telephone Service**) **signal** DS, TSS from the transmit signal S, and an ATM converting unit, which converts these ATM (

Claims: ...A1

1. A method for multiplexing and **demultiplexing** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech (AS) as well as telephone service signalling (TSS), and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) for simultaneous **transmission** thereof over a transmission line (TL), characterized in that said multiplexing comprises a first step wherein said analog MTS (Message Telephone Service) signal (TS) is converted into a digital MTS (Message Telephone Service) signal (DS, TSC), and a second step wherein said digital MTS (**Message Telephone Service**) **signal** (DS, TSC) is embedded into dataframes comprised in said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD), thereby generating a transmit signal (S) which is applied to said transmission line (TL), and that said demultiplexing comprises a third step wherein said transmit signal (S) is split up into said digital MTS (**Message Telephone Service**) **signal** (DS, TSC) and said **ADSL** (Asymmetric **Digital Subscriber Line**) datastream (AD), and a fourth step wherein said

digital MTS (**Message Telephone Service**) **signal** (DS, TSC) is converted into said analog MTS (**Message Telephone Service**) **signal** (TS).

2. A method according to claim 1, characterized in that , in case a failure occurs in said first step, said second step, said third... ..is packed into ATM (Asynchronous Transfer Mode) cells, and an additional substep wherein said ATM (Asynchronous Transfer Mode) cells are embedded in said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) thereby generating said transmit **signal** (S), and furthermore that in said **demultiplexing**, said third step comprises an inverse substep wherein said ATM (Asynchronous Transfer Mode) cells are regenerated from said transmit signal (S), and an additional inverse...said first switching means (S1), said link line (L), and said second switching means (S2).

8. An interface module (CO-IM, S-IM) adapted to **demultiplex** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech (AS) as well as telephone service signalling (TSS), and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) from a transmit **signal** (S) applied to said interface module (CO-IM, S-IM) via a transmission line (TL) coupled to said interface module (CO-IM, S-IM), characterized... ..office station via transmission lines (TL), said central office station and said subscriber stations including interface modules (CO-IM, S-IM) provided to multiplex and **demultiplex** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech as well as telephone service signalling, and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) for simultaneous **transmission** thereof over a said two-wire transmission line (TL), characterized in that to perform said multiplexing, a said interface module (CO-IM, S-IM) in... ..respectively and which is provided to embed said digital speech (DS) and said telephone service code (TSC), which both form part of a digital MTS (**Message Telephone Service**) **signal** (DS, TSC), in frames out of said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) to thereby constitute a transmit **signal** (S), and that to perform said **demultiplexing**, a said interface module (CO-IM, S-IM) in said central office station and in each said subscriber station includes a **demultiplexer** (**DEMUX**) whose input is coupled to said two-wire transmission line (TL) and which is provided to demultiplex said transmit signal (S) and to thereby regenerate...

Claims: ...B1

1. A method for multiplexing and **demultiplexing** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech (AS) as well as telephone service signalling (TSS), and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) for simultaneous **transmission** thereof over a transmission line (TL), characterized in that said multiplexing comprises a first step wherein said analog MTS (Message Telephone Service) signal (TS) is converted into a digital MTS (Message Telephone Service) signal (DS, TSC), and a second step wherein said digital MTS (**Message Telephone Service**) **signal** (DS, TSC) is embedded into dataframes comprised in said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD), thereby generating a transmit signal (S) which is applied to said transmission line (TL), and that said demultiplexing comprises a third step wherein said transmit signal (S) is split up into said digital MTS (**Message Telephone Service**) **signal** (DS, TSC) and said **ADSL** (Asymmetric **Digital Subscriber Line**) datastream (AD), and a fourth step wherein said

digital MTS (**Message Telephone Service**) **signal** (DS, TSC) is converted into said analog MTS (**Message Telephone Service**) **signal** (TS).

2. A method according to claim 1, characterized in that , in case a failure occurs in said first step, said second step, said third... ..is packed into ATM (Asynchronous Transfer Mode) cells, and an additional substep wherein said ATM (Asynchronous Transfer Mode) cells are embedded in said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) thereby generating said transmit **signal** (S), and furthermore that in said **demultiplexing**, said third step comprises an inverse substep wherein said ATM (Asynchronous Transfer Mode) cells are regenerated from said transmit signal (S), and an additional inverse...said first switching means (S1), said link line (L), and said second switching means (S2).

8. An interface module (CO-IM, S-IM) adapted to **demultiplex** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech (AS) as well as telephone service signalling (TSS), and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) from a transmit **signal** (S) applied to said interface module (CO-IM, S-IM) via a transmission line (TL) coupled to said interface module (CO-IM, S-IM), characterized... ..office station via transmission lines (TL), said central office station and said subscriber stations including interface modules (CO-IM, S-IM) provided to multiplex and **demultiplex** an analog MTS (**Message Telephone Service**) **signal** (TS), comprising analog speech as well as telephone service signalling, and an ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) for simultaneous **transmission** thereof over a said two-wire transmission line (TL), characterized in that to perform said multiplexing, a said interface module (CO-IM, S-IM) in... ..respectively and which is provided to embed said digital speech (DS) and said telephone service code (TSC), which both form part of a digital MTS (**Message Telephone Service**) **signal** (DS, TSC), in frames out of said ADSL (Asymmetric **Digital Subscriber Line**) datastream (AD) to thereby constitute a transmit **signal** (S), and that to perform said **demultiplexing**, a said interface module (CO-IM, S-IM) in said central office station and in each said subscriber station includes a **demultiplexer** (**DEMUX**) whose input is coupled to said two-wire transmission line (TL) and which is provided to demultiplex said transmit signal (S) and to thereby regenerate...

Claims: ...Datenstromes (AD) für die gleichzeitige Übertragung von diesen auf einer Übertragungsstrecke (TL), dadurch gekennzeichnet, dass die Multiplexierung einen ersten Schritt, in dem das analoge MTS-(**Message Telephone Service**)-Signal (TS) in ein digitales MTS-(**Message Telephone Service**)-**Signal** (DS, TSC) umgewandelt wird, und einen zweiten Schritt umfasst, in dem das digitale MTS-(**Message Telephone Service**)-**Signal** (DS, TS) in in dem ADSL- (Asymmetric Digital Subscriber Line)-Datenstrom (AD) enthaltene Datenrahmen eingebettet wird, wodurch ein Übertragungssignal (S) erzeugt wird, das auf die Übertragungsleitung (TL) gegeben wird, und dass die Demultiplexierung einen dritten Schritt, in dem das Übertragungssignal (S) in das digitale MTS-(**Message Telephone Service**)-**Signal** (DS, TSC) und den **ADSL**- (Asymmetric Digital Subscriber Line) -Datenstrom (AD) aufgeteilt wird, und einen vierten Schritt umfasst, in dem das digitale MTS-(**Message Telephone Service**)-**Signal** (DS, TSC) in das analoge MTS- (Message Telephone Service)-Signal (TS) umgewandelt wird.

2. Verfahren nach Anspruch 1, dadurch gekennzeichnet, dass wenn in dem ersten...Digital Subscriber Line)-Datenstrom angelegt werden, und der vorgesehen ist, um die digitale Sprache (DS) und den Telefondienstcode (TSC), die beide Teil eines digitalen MTS-(**Message Telephone Service**)-**Signals** (DS, TSC) sind, in Rahmen des **ADSL**-(Asymmetric Digital Subscriber Line)-Datenstromes (AD) einzubetten und so ein Übertragungssignal (S) zu bilden, und dass zum Durchfuhren der **Demultiplexierung** das Schnittstellenmodul (CO-IM, S-IM) in der zentralen Amtsstation und in jeder der Teilnehmerstationen einen Demultiplexer (DEMUX), dessen Eingang an die Zweidraht-Übertragungsleitung (TL...

5/3K/9 (Item 9 from file: 348)

00421926

Fiber optic telecommunication system employing continuous downlink, burst uplink transmission format with preset uplink guard band.

Patent Assignee:

- **BROADBAND TECHNOLOGIES, INC.** (1234420)
Research Triangle Park; North Carolina (US)
(applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)

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- **Casper, Paul W.**
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- **Toy, James W.**
2811 S. Cameron Street; Melbourne FL 32901; (US)
- **Evans, Gregory M.**
204 Electra Drive; Cary N.C. 27513; (US)
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Legal Representative:

- **Wilhelm & Dauster Patentanwälte European Patent Attorneys (101041)**
Hospitalstrasse 8; W-7000 Stuttgart 1; (DE)

	Country	Number	Kind	Date	
Patent	EP	425871	A2	19910508	(Basic)
Patent	EP	425871	A3	19920422	
Application	EP	90119655		19901013	
Priorities	US	429083		19891030	

Specification: ...have been transmitted over the uplink fiber from the subscriber interface sites. Each of the downlink messages identifies the subscriber interface site for whom the **message** is intended and specifies which **digital subscriber line** packets are directed to it. The recipient subscriber interface site **demultiplexes** the contents of the message and (via signal interface units) routes the respective television channel **signals** and **telephony signals** to destination equipment (e.g. TV set top decoder, telephone handset).

The channel selection mechanism at the master site preferably includes an AC-coupled distribution...

5/3K/11 (Item 2 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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01000461

DYNAMIC BANDWIDTH ON DIGITAL SUBSCRIBER LINES

Patent Applicant/Patent Assignee:

- **INTEL CORPORATION**

2200 Mission College Boulevard, Santa Clara, CA 95052; US; US(Residence);
US(Nationality)

Inventor(s):

- **HANSEN Carl**

19504 SW Ruth Court, Aloha, OR 97007; US

Legal Representative:

- **MALLIE Michael J (agent)**

Blakely Sokoloff Taylor & Zafman, 7th Floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025(et al); US

	Country	Number	Kind	Date
Patent	WO	200330512	A1	20030410
Application	WO	2002US31333		20020930
Priorities	US	2001967047		20010928

Detailed Description:

...3b. In alternate embodiments, framer 370 can be separate from or independent of DSLAM 340.

[00241 Control circuit 310 sends control signals to **demultiplexor** 380 and **demultiplexor** 390 to select the **signals** that are to be passed from **DSL** link 350. In one embodiment, **demultiplexor** 380 passes an 8-bit **signal** to **telephone** 300 (via a digital to analog converter, not shown) when telephone 300 is in the off-hook condition.

Demultiplexor 390 selects between passing the full...

Claims:

...hook state and the second state is an off-hook state.

23 The apparatus of claim 20 wherein the framer further comprises:

13a first **demultiplexor** to pass **signals** from the **DSL** link, the **signals** from the **DSL** link including **data signals** and voice **signals**, the **data signals** consuming a first bandwidth when the telephone is in the first state and a second bandwidth when the telephone is in the second state; and a second **demultiplexor** coupled to receive signals passed by the first demultiplexor, the second demultiplexor to pass the signals from the first demultiplexor and to pass the full **signals** to the **telephone** when the telephone is in the second state and to pass reduced signals when the telephone is in the first state.

10 24. A...

5/3K/12 (Item 3 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

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00986361

METHOD OF ESTABLISHING A SUBSCRIBER CONNECTION AND SYSTEM UTILISING THE METHOD

Patent Applicant/Patent Assignee:

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Patent Applicant/Inventor:

- **GOWDA Umesh**

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- **LAAMANEN Heikki**

Nuottakuja 2 B, FIN-02230 Espoo; FI; FI(Residence); FI(Nationality)

	Country	Number	Kind	Date
Patent	WO	200317634	A1	20030227
Application	WO	2002FI671		20020814
Priorities	FI	20011665		20010817

Detailed Description:

...short-circuit the telephone signal.

In the reverse direction, it would be possible to use the AD converter 18 of the RAFE for converting the **telephone signal** and then filter apart the said signal after **demultiplexing** 12 in the CONWX. In practice, problems would arise because a very high-level **telephone signal** might overload the AD converter 18 so that the **DSL** modem **signal** would be distorted and bit error bursts would occur as a consequence.

5/3K/13 (Item 4 from file: 349)
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00952541

**CUSTOMIZED PROGRAM CREATION BY SPLICING SERVER BASED VIDEO,
AUDIO, OR GRAPHICAL SEGMENTS**

Patent Applicant/Patent Assignee:

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US(Nationality)

Inventor(s):

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Legal Representative:

- **HATTENBACH Brad J(et al)(agent)**
Dorsey & Whitney LLP, Suite 4700, 370 17th Street, Denver, CO 80202; US

	Country	Number	Kind	Date
Patent	WO	200286680	A2-A3	20021031
Application	WO	2002US4553		20020118
Priorities	US	2001767053		20010122

Detailed Description:

...backchannel communication link 570 may by any appropriate communication system such as two-way cable television, personal satellite uplink, the Internet, telephony, T-1 upstream, **digital subscriber line**, wireless **telephony**, or FM **transmission** .

Reconstructed video segments are output from the **demux**/decoder 572 to video D/A converter

5/3K/14 (Item 5 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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00881922

CUSTOMER PREMISES EQUIPMENT FOR VERTICAL SERVICES INTEGRATION

Patent Applicant/Patent Assignee:

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1095 Avenue of the Americas, New York, NY 10036; US; US(Residence);
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429 Girard Street #304, Gaithersburg, MD 20877; US

Legal Representative:

- **SUCHYTA Leonard C (agent)**
c/o Christian R. Andersen, 600 Hidden Ridge Drive, Mailcode HQE03H01, Irving,
TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200214980	A2-A3	20020221
Application	WO	2001US24927		20010807
Priorities	US	2000635695		20000810
	US	2000652140		20000831
	US	2000731054		20001207

Detailed Description:

...300 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 30 0. On the network side, each of the ATU 1 0 Cs 113 connects to the MLJX 115. The MLTX 115 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link i1q. Through subbanding, the MLTX 1.15 may also provide a data concentration for...

5/3K/15 (Item 6 from file: 349)
DIALOG(R)File 349: PCT FULLTEXT
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00881921

TRAFFIC QUEUEING FOR REMOTE TERMINAL DSLAMS

Patent Applicant/Patent Assignee:

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Legal Representative:

- **SUCHYTA Leonard C (agent)**
c/o Andersen, Christian, R., 600 Hidden Ridge Drive, Mailcode HQE03H01,
Irving, TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200214979	A2-A3	20020221
Application	WO	2001US24926		20010807
Priorities	US	2000635695		20000810
	US	2000688213		20001016
	US	2000745467		20001226

Detailed Description:

...300 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 30 0. On the network side, each of the ATU Cs 113 connects to the MUX i15. The MLTX il,5 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link i1q. Through lo subtending, the MLJX li5 may also provide a data concentration for...

5/3K/16 (Item 7 from file: 349)
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00881919

CONGESTION AND THRU-PUT VISIBILITY AND ISOLATION

Patent Applicant/Patent Assignee:

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- **BAUM Robert T**
429 Girard Street #304, Gaithersburg, MD 20877; US

- **WINTER Jeffrey I**
13204 Bellvue Street, Silver Spring, MD 20904; US

Legal Representative:

- **SUCHYTA Leonard C (agent)**
c/o Christian R. Andersen, 600 Hidden Ridge Drive, Mailcode HQE03H01, Irving, TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200214977	A2-A3	20020221
Application	WO	2001US24706		20010807
Priorities	US	2000635695		20000810

Detailed Description:

...to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as lo modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 300. On the network side, each of the ATU-Cs 113 connects to the MUX 115. The MUX n5 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link ng. Through subtending, the MUX 115 may also i5 provide a data concentration for...

5/3K/17 (Item 8 from file: 349)
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00881343

VERTICAL SERVICES INTEGRATION ENABLED CONTENT DISTRIBUTION MECHANISMS

Patent Applicant/Patent Assignee:

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Inventor(s):

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- **SUCHYTA Leonard C (agent)**
c/o Christian R. Andersen, 600 Hidden Ridge Drive, Mailcode HQE03H01, Irving, TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200215492	A1	20020221
Application	WO	2001US24696		20010807
Priorities	US	2000635695		20000810
	US	2001835649		20010417

Detailed Description:

...00 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 300. On the network side, each of the ATU-Cs 113 connects to the MUX 115. The MUX 115 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link 119.

Through subtending, the MUX 115 may also provide a data concentration for the...

5/3K/18 (Item 9 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

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00750785

FIBER-OPTIC SUBSCRIBER TRANSMISSION SYSTEM

Patent Applicant/Patent Assignee:

- **NEC CORPORATION**

7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001; JP; JP(Residence); JP(Nationality); (For all designated states except: US)

Patent Applicant/Inventor:

- **SHIBUTANI Makoto**

7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001; JP; JP(Residence); JP(Nationality); (Designated only for: US)

Legal Representative:

- **HIRATA Tadao**

Park Side House, 2, Ichiban-cho, Chiyoda-ku, Tokyo 102-0082; JP

	Country	Number	Kind	Date
Patent	WO	200064196	A1	20001026
Application	WO	2000JP2532		20000418
Priorities	JP	99111417		19990419

English Abstract:

...and send them to the terminal office through optical fiber cables. The terminal office receives the light signals and extracts the original subscriber signals by **demultiplexing** and D/A conversion of the received light **signals**. **Telephone signals** and xDSL (x **digital subscriber line**) **signals**, which are multiplexed in the subscriber **signals**, are separated by a splitter and terminated by a telephone switch and an xDSL access multiplexer, respectively.

5/3K/20 (Item 11 from file: 349)
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00487360

COMBINED xDSL AND PSTN MODEMS IN A SINGLE PLATFORM

Patent Applicant/Patent Assignee:

- **3COM CORPORATION**

Inventor(s):

- **NORRELL Andrew L**
- **DESJARDINS Philip A**

	Country	Number	Kind	Date
Patent	WO	9918712	A1	19990415
Application	WO	98US21112		19981007
Priorities	US	97946542		19971007
	US	9885648		19980527

Detailed Description:

...splitter 18 having high and low pass filters for ADLS and POTS modem signals, respectively, and imparted onto the two wire subscriber loop 21 for **transmission** to the **telephone** company central office 20.

A second POTS splitter 22 having high and low pass filters is placed at the central office, which **demultiplexes** the **ADSL** and modem analog **signals**. The modem **signals** are sent to a line card 24 where the signals are amplified, converted to digital form, and sent to the telephone company switch 26 for long haul delivery in the switched **telephone** network. The ADSL **signals** are routed to the telephone company's

3

ADSL modem (ATU-C 28) where they are amplified, converted to digital form and multiplexed with other...

5/3K/21 (Item 12 from file: 349)
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00366288

**FLAG FIELD-BASED ROUTING MECHANISM FOR FIBER OPTIC
TELECOMMUNICATION SYSTEM EMPLOYING STS-BASED TRANSMISSION
FORMAT CONTAINING ASYNCHRONOUS TRANSFER MODE CELLS**

Patent Applicant/Patent Assignee:

- **BROADBAND TECHNOLOGIES INC**

Inventor(s):

- **SHARPE Randall B**

	Country	Number	Kind	Date
Patent	WO	9706615	A1	19970220
Application	WO	96US12911		19960808
Priorities	US	95512654		19950808

Detailed Description:

...have been transmitted over the uplink fiber
22 from the customer premises equipments, Each downlink
message identifies the optical network unit 30 for whom the
message is intended and specifies which **digital subscriber
line** packets are directed to it. The recipient optical
network unit 30 **demultiplexes** the contents of the message
and routes the respective television channel **signals** and
telephony signals to customer premises equipment (CPE),
such as a TV set top decoder 41 associated with television
set 43, telephone handset, etc., at the destination site...

5/3K/22 (Item 13 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

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00342482

**POINT-TO-MULTIPOINT BROADBAND SERVICES DROP WITH MULTIPLE TIME
SLOT RETURN CHANNEL FOR CUSTOMER PREMISES EQUIPEMENT**

Patent Applicant/Patent Assignee:

- **BROADBAND TECHNOLOGIES INC**

Inventor(s):

- **SHARPE Randall B**
- **LONG Thomas Joel**

	Country	Number	Kind	Date
Patent	WO	9624994	A1	19960815
Application	WO	96US1545		19960206

	Country	Number	Kind	Date
Priorities	US	95383984		19950206

Detailed Description:

...have been transmitted over the uplink fiber 22 from the customer premises equipments, Each downlink message identifies the optical network unit 30 for whom the **message** is intended and specifies which **digital subscriber line** packets are directed to it. The recipient optical network unit 30 **demultiplexes** the contents of the message and routes the respective television channel **signals** and **telephony signals** to customer premises equipment (CPE), such as a TV set top decoder 41 associated with television set 43, telephone handset (not shown), etc., at the...

10/3K/1 (Item 1 from file: 348)

02053905

multimedia data transacting system and method

Patent Assignee:

- **SAMSUNG ELECTRONICS CO., LTD.** (3982727)
415 Maetan dong, Yeongtong-gu; Suwon-si, Gyeonggi-do (KR)
(Applicant designated States: all)

Inventor:

- **Kang, Yong-jin**
324-704 Samick APT, Cheongmyeong-maeul Yeongtong; Yeongtong-gu, Suwon-si Gyeonggi-do; (KR)

Legal Representative:

- **Davies, Robert Ean et al (99211)**
Appleyard Lees, 15 Clare Road; Halifax HX1 2HY; (GB)

	Country	Number	Kind	Date	
Patent	EP	1657931	A2	20060517	(Basic)
Application	EP	2005254346		20050712	
Priorities	KR	204054814		20040714	

Specification: ...transmitter/receiver (not shown) which can communicate in a wired or wireless manner using technologies such as Wi-Fi, GPRS (General Packet Radio Service), DSL (**Digital Subscriber Line**), or a telephone modem. This **data** transmitter/receiver can function as a communication modem that can both packetize data for transmission and receive packetized data. Accordingly, the broadcast receiving apparatus 230... ...The data transmitter/receiver 340 can communicate in a wired or wireless manner using technologies such as Wi-Fi, GPRS (General Packet Radio Service), DSL (**Digital Subscriber Line**), or a **telephone** modem. Accordingly, the **data**

transmitter/receiver 340 can function as the communication modem that can both packetize data for transmission and receive packetized data. The broadcast receiving apparatus 230...data transmitter/receiver 340 that can communicate in a wired or wireless manner using technologies such as Wi-Fi, GPRS (General Packet Radio Service), DSL (**Digital Subscriber Line**), or a **telephone** modem. The **data** transmitter/receiver included in the broadcast receiving apparatus 230 may have a unique communication number, such as a mobile number or a telephone number allocated...

10/3K/2 (Item 2 from file: 348)
01163290

Telecommunication system with a multi-channel digital subscriber line interface and method

Patent Assignee:

- **LUCENT TECHNOLOGIES INC.** (2143720)
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(Applicant designated States: all)

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- **Sentoff, Stephen H.**
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Legal Representative:

- **Watts, Christopher Malcolm Kelway, Dr. et al (37391)**
Lucent Technologies (UK) Ltd, 5 Mornington Road; Woodford Green Essex, IG8 0TU; (GB)

	Country	Number	Kind	Date	
Patent	EP	1014670	A2	20000628	(Basic)
Application	EP	99309848		19991207	
Priorities	US	220175		19981223	

Specification: ...The voice traffic is then sent to an ATM multi-channel voice interface 28. The central office ATM multi-channel voice interface 28 extracts and **demultiplexes** the voice data signals from the different broadband channels associated with the additional telephones 26 and couples the recovered voice **signals** from the additional **telephones** 26. The logical voice channels are extracted by the central office ATM multi-channel interface 28 and delivered to the central office switch interface 19. Data, other than voice data associated with the additional telephones, on the other broadband channels is passed by the central office **ADSL** interface 20A to the **data** network 18.

In the reverse direction, voice signals coming into the POTS line terminating ports associated with the additional telephones 26 are converted to a...

10/3K/3 (Item 3 from file: 348)
00765868

Device and method for the management of multicast calls for broadcast audio and video services in a local ATM node

Patent Assignee:

- **ITALTEL SOCIETA ITALIANA TELECOMUNICAZIONI s.p.a.** (406990)
P.le Zavattari, 12; I-20149 Milano (IT)
(applicant designated states: DE;FR;NL;SE)

Inventor:

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- **Daniele, Antonella**
Via C; Battisti, 31/A; I-20010 Bareggio (MI); (IT)
- **Morganti, Michele**
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Legal Representative:

- **Giustini, Delio (47611)**
c/o Italtel Societa Italiana Telecomunicazioni s.p.a. P.O. Box 10; I-20019 Settimo Milanese (MI); (IT)

	Country	Number	Kind	Date	
Patent	EP	719066	A2	19960626	(Basic)
Application	EP	95118515		19951124	
Priorities	IT	94MI2622		19941223	

Specification: ...unit SET-TOP.

The CPN network is physically connected to the PSTN network and to the ATM network by a copper twisted pair which transmits **signals** preferably according to the **ADSL** (Asymmetric **Digital Subscriber Loop**) technique. The **ADSL** channel transmits the traditional **telephone** type **signal** as well as the data relative to the new audio and video services. As explained hereafter the **ADSL** technique makes it possible to transmit a **data** flow of 6 Mbit/s from the node A(underscore)NOD towards the customer networks and up to 400 Kbit/s in the opposite direction.

In each one of the subscriber networks the multiplexing (and **demultiplexing**) of flows arriving (and addressed) from the telephone set TELEPHONE and from the SET-TOP is performed by the termination unit CTRM (Customer TeRMination).

In...

10/3K/4 (Item 4 from file: 348)

00736034

System and method to supply multimedial distributive and interactive audio and video services to residential users

Patent Assignee:

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	Country	Number	Kind	Date	
Patent	EP	693856	A2	19960124	(Basic)
Patent	EP	693856	A3	20031119	
Application	EP	95201991		19950719	
Priorities	IT	94MI1552		19940722	

Specification: ...NOD.

The CPN network is connected to the PSTN network and to the ATM network through the ADLS technology channel implemented on twisted pair. The **ADSL** channel transports both the traditional **telephone signal** and the **information** relevant to new audio and video services. As stated hereafter, the **ADSL** technique allows the **transmission** up to 7 Mbit/s information flow from the node A(underscore)NOD towards the user network and up to 640 kbit/s in the opposite direction. In each user network, multiplexing (and **demultiplexing**) of flows coming (and destined to) the telephone equipment TELEPHONE and from the SET TOP unit is made by the user termination unit CTRM (Customer...

10/3K/6 (Item 2 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

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00354545

SHARED USE VIDEO PROCESSING SYSTEMS

Patent Applicant/Patent Assignee:

- BELL ATLANTIC NETWORK SERVICES INC

Inventor(s):

- SISTANIZADEH Kamran
- SEAZHOLTZ John W
- LAWRENCE William F

	Country	Number	Kind	Date
Patent	WO	9637059	A1	19961121
Application	WO	96US3688		19960318
Priorities	US	95441977		19950516
	US	95546255		19951020

Detailed Description:

...broadband information (see Figure 7A). In the living unit, the splitter/dombiner in the NID 35 splits off the downstream POTS information and supplies that **information** as standard **telephone signals** to one or more telephones 41. The splitter/combiner in ,the NID 35 supplies the downstream signaling channel and the ADSL line code frequency channel from the loop 34 to splitter/comb iner 191 in the terminal 100. The splitter/combiner, 191 frequency **demultiplexes** the downstream **signals** and supplies the **ADSL** line code frequency channel to the demodulator 192. The splitter/combiner 191 supplies the downstream signaling frequency channel to the QPSK demodulator 197.

The QPSK...

9/3K/2 (Item 2 from file: 349)

DIALOG(R)File 349: PCT FULLTEXT

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00881922

CUSTOMER PREMISES EQUIPMENT FOR VERTICAL SERVICES INTEGRATION

Patent Applicant/Patent Assignee:

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Legal Representative:

- **SUCHYTA Leonard C (agent)**
c/o Christian R. Andersen, 600 Hidden Ridge Drive, Mailcode HQE03H01, Irving, TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200214980	A2-A3	20020221
Application	WO	2001US24927		20010807
Priorities	US	2000635695		20000810
	US	2000652140		20000831
	US	2000731054		20001207

Detailed Description:

...the MDF i o 1 to a second ATU-C I I 32in the CO loo.

The ATU-C type ADSL units 113 include appropriate **frequency dependent** combiner/splitters, for segregating out the voice telephone traffic. Thus each ADSL unit 113 provides a connection for telephone traffic from the associatedline 300 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 30 0. On the network side, each of the ATU 1 0 Cs 113 connects to the MLJX 115. The MLTX 115 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link i1q. Through subtending, the MLTX 1.15 may also provide a data concentration for...

9/3K/3 (Item 3 from file: 349)
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00881921

TRAFFIC QUEUEING FOR REMOTE TERMINAL DSLAMS

Patent Applicant/Patent Assignee:

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c/o Andersen, Christian, R., 600 Hidden Ridge Drive, Mailcode HQE03H01,
Irving, TX 75038; US

	Country	Number	Kind	Date
Patent	WO	200214979	A2-A3	20020221
Application	WO	2001US24926		20010807
Priorities	US	2000635695		20000810
	US	2000688213		20001016
	US	2000745467		20001226

Detailed Description:

...s line 300, connects through the
MDFio to a first ATU-CII3 in the CO loo. Thesecond customer's line
3002 connects through the MDFio to a second ATU-CII3 in the CO loo.

The ATU-C type ADSL units 113 include appropriate **frequency dependent**
combiner/splitters, for segregating out the voice telephone traffic. Thus
each ADSL unit 113 provides a connection for telephone traffic from the
associated line 300 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as
modulator/demodulators (modems) for sending and receiving **data** over
the subscriber **telephone** lines 300. On the network side, each of the ATU
Cs 113 connects to the MUX 115. The MLTX 115 multiplexes and
demultiplexes the upstream and downstream **data** for the **ADSL** modems
113 and provides a connection to a high-speed link 114. Through
10 subtending, the MLTX 115 may also provide a data concentration for...

9/3K/4 (Item 4 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00881919

CONGESTION AND THRU-PUT VISIBILITY AND ISOLATION

Patent Applicant/Patent Assignee:

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	Country	Number	Kind	Date
Patent	WO	200214977	A2-A3	20020221
Application	WO	2001US24706		20010807
Priorities	US	2000635695		20000810

Detailed Description:

...s line 300 connects through the MDF io1 to a second ATU-C 113 in the CO io1. The ATU-C type ADSL units 113 include appropriate **frequency dependent** combiner/splitters, for segregating out the voice telephone traffic. Thus each ADSL unit 113 provides a connection for telephone traffic from the associated line 300 to the POTS switch 103.

The ADSL units 113 in the CO (ATU-Cs) essentially act as io modulator/demodulators (modems) for sending and receiving **data** over the subscriber **telephone** lines 300. On the network side, each of the ATU-Cs 113 connects to the MUX 115. The MUX n5 multiplexes and **demultiplexes** the upstream and downstream **data** for the **ADSL** modems 113 and provides a connection to a high-speed link ng. Through subtending, the MUX 115 may also io provide a data concentration for...